

THE
INDIAN FIELD SHIKAR BOOK

COMPILED BY
W. S. BURKE
Late Editor of "The Indian Field," Calcutta

SEVENTH EDITION

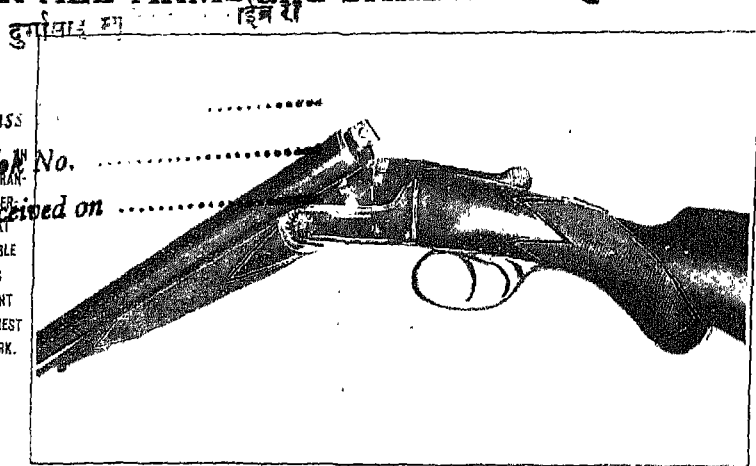
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P R E F A C E.

CONSTANT QUERIES relating to shikar and kindred matters convince me that the necessity exists for a small cyclopædia compiled with the special object of helping the sportsman readily to identify his game, understand its habits, know when, how, and where to get it, compare his trophies with the records, while having ready to hand much other information of particular use and interest to him. The identification of a single specimen frequently necessitates reference to several standard books on sport and natural history. This means either the possession of a library of expensive volumes or delay in getting enquiries answered. The object of "The Indian Field Shikar Book" is to supply this want by placing in the hands of Indian sportsmen all this information, concisely compiled and arranged for easy reference.

For much of the material contained in the section on Big Game, I am indebted to the works of Jerdon, Blanford, Forsyth, Sir Samuel Baker, Colonel A. E. Ward, Major Shakespear, Sanderson, "Raoul," Major-General A. A. Kinloch, E. B. Baker, the records of the British, Indian, Madras and other Museums, the *Badminton* Big Game volumes, the Journals of the Bombay Natural History Society, and the columns

of the *Asian* and *Indian Field*, which newspapers I conducted for several years. In respect of the details of trophies, I have given the records and quoted my authority. What I regard as of value to the present-day sportsman are the numerous measurements of big game shot nowadays. These must assuredly be of more interest to the Indian shikari than records of trophies shot several decades ago. For these, I am much indebted to scores of sportsmen who have supplied the details I now publish, and assisted me with valuable suggestions. To one and all I express my sincere thanks.

In the Game Bird sections, my chief references have been Jerdon, Hume and Marshall, Blyth, Oates, F. Finn, E. C. Stuart Baker and D. Dewar; and in the Fish section, Day, Beavan and Thomas have been my leading authorities.

I trust the other sections of the book will be found of practical value by those for whom it has been compiled. The Game Regulations are the latest issued and represent the rules governing game preservation and shooting over practically the whole of India. In this edition, the Game Registers are bound separately and are carried in the pocket on the back-cover: refills can be obtained at the publishers.

W. S. B.

[Calcutta, 1927.]

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Fig. 2.
Sectional view showing the
interior steel discs for
promoting expansion on
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BIG GAME.

TIGER.

Felis tigris.—Indian names : *Bagh*, Hind. ; *Sher*, North India ; *Nahar*, Central India ; *Huli*, Southern India ; *Koola*, Kurku ; *Poolie*, Gond. Cattle-eater, *Ontea bagh* ; Game-eater, *Lodhia bagh* ; Man-eater, *Admi khor*.

Habitat.—Throughout India, met with in the Himalayas at 8,000 feet.

Period of gestation.—Fourteen or fifteen weeks ; cubs mostly born from December to June ; seldom more than two cubs at a time are reared, and they stay with their mother till nearly full grown.

Description.—Various shades of tawny yellow, striped with transverse black bars, which occupy the sides of the head, neck and body, and are continued to the

tail in the form of rings, the last of the series occupying the extremity thereof and giving it a black tip. Under-parts of body and inner side of legs almost entirely white.

Measurements.—Average length from tip to tip, 9 feet 6 inches; the tail usually measures a little less than a third of the total length. The skin of a ten-foot tiger will stretch to twelve feet and over. Tigresses measure from 8 feet 3 inches to 8 feet 9 inches; and seldom tape over 9 feet. The older the animal, the more prominent is the ridge of bone that runs along the top of the brain pan. There are two methods of measurement. In one, the tiger is laid flat on its side and pulled out so as to lie straight; the tape is then run from the tip of the nose and between the ears to the tip of the tail, closely following the curves of the body: in the other, the tiger is disposed as above, pegs are placed at the nose and tail ends, and the measurement is taken directly between these points.

The most vital spot to aim for in this, and all the *carnivora*, is just behind the shoulder, if the animal is broadside on; if facing, the aim should be where the neck and shoulder join, or centre of the chest, or, if on level ground, and you are kneeling, at the nostril.

A tiger usually kills its own food, but will eat carrion. Tigers are shot from elephants, from *machans* over kills or live bait, usually bullocks picketed near

the *machan*, and occasionally on foot; sometimes they are netted or caught in traps.

Record measurements.—From a close study of tiger literature, I have no doubt that the existence of the 12-foot tiger (*Felis elongatus* of the sceptic) has been conclusively proved, and in spite of the discussions of recent years, it appears to me that nothing more remains to be said on this subject. Old time sportsmen whose veracity cannot be questioned, have vouched for tigers 12 feet and over, and though, for reasons that are obvious to present-day sportsmen, the occurrence of these huge felines is nowadays extremely unlikely, there is no more reason to doubt their former existence than there is to question that of other big game, such as deer, and the great sheep and goats of the Himalayas, which years ago sported trophies infinitely larger than anything the sportsman brings to bag in these days of universal shikar and over-shot grounds.

Gen. Sir C. Reid, K.C.B., records a tiger of 12 feet 2 inches, the skin of which measured 13 feet 5 inches (Sterndale's *Mammalia*). Col. G. Boileau, Col. Ramsay, and Mr. C. Shillingford, the famous Purneah tiger-slayer, are credited by Sterndale with tigers of 12 feet, while Sir H. Green, Sir J. F. Yule, the Hon. R. Drummond, Col. D. G. Stewart, and Col. Shakespeare vouch for tigers 11 feet and upwards. Col. J. Sherman, Sir E. Bradford, the Hon. Sir H. Ramsay, Sir Joseph Fayer, and Mr. F. B. Simson ("Judex") and several others whose names were household words

among Indian sportsmen in bygone years, all give particulars of tigers 10 feet 5 inches and upwards—all measured before the skins were removed. Mr. A. S. Shillingford writing some years ago in an Indian sporting paper, said concerning big tigers measuring between 11 and 12 feet: (1) The late Sir J. F. Yule, K.C.S.I., B.C.S., states that he has "killed tigers of 11 feet odd inches twice or thrice"; (2) Col. George Boileau "killed a tiger at Muteareah, in Oudh, that was well over 12 feet before the skin was removed, adding that he was of quite an exceptional size, and in his experience of 17 years' constant hunting he had never seen his equal"; (3) the Hon. J. R. Drummond, late Commissioner of Rohilkund, says "he never saw a 12-foot tiger, though he shot one of 11 feet 9 inches, measured *as he lay on the ground before being padded*"; (4) Col. D. G. Stewart says the largest tiger he ever saw measured 11 feet $\frac{1}{2}$ inch. "He had personally measured 80 tigers." (5) Maj.-Gen. Sir H. Green, K.C.S.I. C.B. says "the biggest tiger he ever assisted in killing was one shot near Surat, which was 11 feet 11 inches, measured as it lay, and whose skin when pegged out was 12 feet 4 inches." Sir H. Green shot one himself which measured 10 feet 11 inches. He adds: "I heard by last mail from Claude Clerk, at Hyderabad, who said he killed to his own gun the biggest tiger he had ever seen, as it measured 11 feet 6 inches before skinning." Sir H. Green concludes by expressing his belief that, "though they must be very rare, tigers of 12 feet and over do exist"; (6) Mr. C. Shillingford, a well-known shikari and a personal friend of Sir Joseph Fayrer, and in whose company he had

shot a great deal, and whose experience extended over thirty-five years, during which period he shot more than two hundred tigers, says that in 1849 he shot the largest tiger he had ever seen, and which measured, where he fell, 12 feet 4 inches. This tiger was very old, with short hair and light in colour. Mr. Shillingford shot another of 11 feet 10 inches, and, in 1855, one of 11 feet 4 inches. He shot several varying from 10 feet 6 inches to 11 feet; but he adds that "the majority of tigers seldom exceed 10 feet, and many are only 9 feet 8 inches to 9 feet 10 inches"; (7) Mr. Cumming shot "a few over 11 feet; one at Rohinipore of 11 feet 4 inches, one at Kaladearah, in 1865, of 11 feet 2 inches, and one at Gour, in 1871, of 11 feet 2 inches"; and (8) Sir Charles Reid, K.C.B., informed Sir Joseph Fayrer "that he had shot in the Doon a tiger which measured 12 feet 3 inches *before the skin was removed.*"

To Mr. Moray-Brown's measurements we may add the following half-dozen supplied by Mr. F. A. Shillingford to the *Asian* in August 1890: (1) "On 20th March, 1866, my neighbour, the late Mr. Henry Cave, of Gondawarah, Purneah, shot a tiger 11 feet, measured on the ground *where he fell*, and the hunt is described in the *O. S. M.* for July 1868, p. 582." (2) On 13th December, 1867, at Bankacote, about four miles from this factory (Kolassy, Purneah) I accounted for a tiger 11 feet, *measured about three hours after death.*" (3) "On 18th October, 1868, my brother, the late Mr. Joe Shillingford, shot a tiger 11 feet." (4) "On 3rd November, 1868, Mr. Joe Shillingford shot the largest of his many

large tigers at Baralia Thappa, Tappra, in the Kosi Dearas, measuring 11 feet 5 inches." (5) "On 18th April, 1870, the late Mr. W. DeCourcy shot a tiger 11 feet 1 inch." (6) "On 19th April, 1871, Mr. Joe Shillingford shot a tiger 11 feet. The remark in his journal is "huge tiger, skull sent to the Museum."

Turning to "Big Game Shooting" (*Badminton Library*), we find no less than thirty-five tiger measurements between 10 feet and 11 feet 9 inches, recorded by Sterndale and in the columns of the *Asian, Land and Water*, etc. Col. J. T. C. Rose, in a letter to the *Field*, wrote as follows regarding a huge tiger:—

During Christmas week, 1873, in the Nursingpore District, Central Provinces, India, it was my good fortune to kill a tiger, whose footsteps had been noted in the jungles for a year or so as being of rare size.

"The tiger was measured very precisely a few minutes after death by those fine and experienced sportsmen the late Mr. LeMesurier, then of the G. I. P. Railway, and Col. C. Plowden, in my presence, and I copy the details as written down at the time.

"Length, 7 feet 6½ inches; tail only, 3 feet 3 inches; round forearm, 19½ inches; height from centre of pad to tip of shoulder, 3 feet 6 inches; girth round body at forehead, 4 feet 8 inches. The skin, used as a carpet for many years, now

measures : to base of tail, 7 feet 11 inches ; tail, 3 feet 8 inches ; total, 11 feet 7 inches."

The 12-foot tiger which occasioned a big discussion some years ago was shot in the Jalpaiguri Duars by a lady, Mrs. Laurie Johnson, and the measurement was, if I remember rightly, vouched for by the late Mr. Pughe, I. G. of Railway Police, Col. Evans Gordon and others. In 1897 Mr. P. J. de Launey shot, at Comilla, a tiger that taped 11 feet $1\frac{1}{2}$ inches ; the measurements were attested by several people in the station, and in the *Asian* there appeared full details, together with photographs. When the skin was sent to Calcutta to be dressed, I took the following measurements :—

Length, from tip of nose to tip of tail	12 feet 6 inches.
Length of tail from root to tip	3 " 5 "
Width under forearm	5 " 3 "
Width across centre of skin	4 " 0 "

It will be seen from the width of this skin that undue stretching lengthways had not been indulged in, and I also convinced myself of this by a very careful examination of the skin.

When I was conducting the *Asian*, H. H. a former Maharajah of Cooch Behar favoured me with a list of tigers shot in Cooch Behar, and the Terai

Journal, between 1887 and 1897. From this list I make the following
 Notes:—

Total length.	Length of body.	Girth behind shoulder.		Biceps.	Forearm.	Round head.	Height.	Weight.	Length of dry skull.
		In.	inches.	In.	In.	In.	In.	Lb.	
10	11	54½	27½	20	38	38	403	..	..
9	10	52	26	19½	36	39	612	..	..
10	11	51½	26½	20	37	36½	496	..	..
9	10	52½	29	18½	38½	40½	467	..	..
9	10	51	28	19½	38	38½	406	..	..
9	10	51½	28	18	39	40½	492	..	..
9	10	51	28½	19½	36½	40½	489	..	..
9	10	52	29	19	37	38	481	..	..
9	10	52½	26	19½	35	34½	477	..	..
10	11	52½	26½	18½	36	41½	453	..	..
9	10	52	29	18½	35	42½	455	..	..
9	10	51	22	16	30	34	360	..	..
9	10	51	23	15½	29½	38½	343	..	..

BIG TIGERS.

Length.	Skull.	Weight.	Place.	Remarks.
Ft. In.	Inches.	Lb.		
10 9	Sheepur Jungles, Gwalior State	H. H. the Maharajah Scindia.
10 6	Sonkhar, G. P.	J. F. Holmes.
10 4 $\frac{1}{2}$	S. India	Maj. G. W. Priestley.
10 4	Malabeshwar	Gen. Baysa Sahib of Indore.
10 4	Portunund, Nilgiris	G. Hadfield.
10 4	13 x 9	..	Myitkyina	W. S. Thom.
10 4	Nepal	J. G. Raunthorpe.
10 3 $\frac{1}{2}$	Pecunade, S. I.	H. T. Deane.
10 3	Pykara Falls, Nilgiris	G. Hadfield.
10 3	Nilambur, S. India	Lieut. R. L. Norrington.
10 2	Reval, C. P.	Col. A. E. Ward.
10 2	Teral	J. C. Traunthorpe.
10 2	Chowpura	W. Augier.
10 1 $\frac{1}{2}$	14 $\frac{1}{2}$ x 10 $\frac{1}{2}$	..	Kumaon	Col. A. E. Ward.
10 0	Kumaon Bhabur	A. E. G. Clacey, C.S.
9 11	Kyauktaga, Burma	A. Hembrough. (<i>Asian.</i>)
9 11	N. Shan States	G. M. Turner.
9 10	Teral	S. H. Berkeley.

BIG TIGERS—(contd.).

Length.	Skull.	Weight.	Place.		REMARKS.
Fr. Ind.	Inches.	Lb.			
9 9 8 $\frac{1}{2}$	..	..	Kumaon Bhampur Garwa .. *	..	A. E. G. Cassey, C.S. (Female.) Col. T. Macpherson. (<i>B. N. H. S. Journal.</i>)
9 7 7	14 2 6 $\frac{1}{2}$	..	Hyderabad ..	..	Maj. R. G. Burton.
9 9 7	12 7 10	..	Ditto ..	..	Ditto.
9 9 7	13 $\frac{1}{2}$ 8 $\frac{1}{2}$	..	8,000 feet altitude	..	A. P. Davis. (Female.)
9 9 7	13 $\frac{1}{2}$ 8 $\frac{1}{2}$	..	Hyderabad	..	Maj. R. G. Burton.
9 9 7	..	..	Ditto ..	..	Ditto.
9 9 7	..	..	Bukin Duar	..	Lieut. W. L. Hogg.
9 9 7	..	..	N. Gaohar ..	..	E. G. Stuart Baker, M.Z.S.
9 9 7	..	..	Ditto ..	..	Do. (Young tiger, with milk-teeth.)
9 9 7	..	..	Gonda ..	..	E. G. Brown.
9 6 6	Forearm 10 $\frac{1}{2}$	..		..	G. M. Turner.
9 9 6	..	..	Shan States ..	..	Maj. R. G. Burton.
9 9 6	14 $\frac{1}{2}$ 9 $\frac{1}{2}$	..	Hyderabad ..	..	W. H. Pitt.
9 9 6	..	..	Central India	..	R. D. T. Alexander.
9 9 5 $\frac{1}{2}$	..	..	Mandla, G. P.	..	Capt. M. H. Hunter. (<i>Asian.</i>)
9 9 5	..	563	G. P.	..	Ditto.
9 9 3	..	448	Ditto ..	..

BIG TIGERS—(concl'd.).

Length.		Skull.	Weight.	Place.		REMARKS.
Ft.	Ins.	Inches.	Lb.			
9	2	..	420	G. P.	..	Capt. M. H. Hunter. (<i>Asian.</i>)
9	1	..	..	Sahelgunge	..	Capt. H. J. Cracknell. (<i>Female.</i>)
9	1	..	513	C. P.	..	Capt. M. H. Hunter. (<i>Asian.</i>)
9	1	..	..	U. P.	..	Lieut. G. Shepherd, A. D. C. (<i>Female.</i>)
9	0	15 × 9	..	Kolkaz Berar	..	Capt. E. A. Jenkins.
9	0	..	..	Kumaon Bhabur	..	J. Broadwood.
8	11½	..	..	Central India	..	W. H. Pitt.

LION.

Felis leo.—Indian names : *Sher babbar*, Hind. ; *Oontea bagh*, *Savaz*, Guzerat ; *Shingal*, Bengal.

Habitat.—Almost extinct in India, a few being still left in the Gir Junagadh Forest, Kathiawar, Mount Abu, and, perhaps, Oodeypur.

Period of gestation.—103 days. Two or three are produced in a litter.

Description.—A uniform pale tawny without spots or stripes, black-tufted tail, mane usually very scanty. Average length, 8½ to 9 feet, 3½ feet in height.

Body, $5\frac{1}{2}$ to $6\frac{1}{2}$ feet long ; tail, $2\frac{1}{2}$ to 3 ; mane sometimes 10 inches to a foot long. Average weight about 400 lb.

Lions are bolder and more noisy than tigers, especially in the evening and at night : they are nocturnal in their habits and are probably less powerful than tigers. The mane is not developed until after full growth.

Measurements.—The largest Indian lion recorded in recent years was one of 9 feet 10 inches, shot by the late Lieut. Percy Hancock. Lieut.-Col. Fenton, in the *Indian Field*, records one he shot in the Gir Forest of 9 feet 5 inches, and in the same locality Lord Harris bagged one of 9 feet 7 inches. In Steindale's *Mammalia* we find mention of lions from 8 feet 6 inches to 9 feet 6 inches, and the old *Delhi Gazette* contains an account of the shooting of a Central India lion that measured 8 feet 7 inches, tail 2 feet 10 inches, height 3 feet 3 inches, and girth 3 feet 10 inches. In the *Oriental Sporting Magazine* of July 1876, there is given a 9 feet 3 inches measurement.

Length,		Place.			REMARKS.
Ft.	Ins.				
9	11	Gir Forest	..	..	Late Lieut. P. Hancock.
9	5	Ditto ..	..	..	Lieut.-Col. L. L. Fenton.

LEOPARD OR PANTHER.

Felis pardus.—Indian names: *Cheetah bagh*, *Chota bagh*, Hind.; *Tendua*, *Bagh-ara*, Northern India; *Lagho bagh*, Central India; *Tewria*, Kurku; *Cheetar* or *Behcera*, Gond.; *Dipdo*, Guzerat; *Kirab*, Deccan; *Hongya*, *Kirba* and *Ibba*, Canarese; *Chinna-puli*, Marathi; *Burkal*, Telugu; *Tahr-hay*, in the Himalayas; *Sik*, Tibet.

Habitat.—Throughout India; particularly partial to rocky hills.

Under this head come the Panther or Pard and the Leopard, which are now recognised as only varieties; also the Black Panther.

Period of gestation.—Fifteen weeks; usually from two to four cubs; breeding time, February and March.

Description.—Pale fulvous yellow, belly white with black rings in the form of rosettes all over the body, rings on tail. White markings on the muzzle. Black panthers are by no means uncommon. Extremely stealthy in habit, treacherous and ever watchful, has an extraordinary faculty for concealment, utilizes the most unpromising cover, climbs trees with the greatest ease, and, unlike the tiger, dislikes water, and will not readily swim, though it can do so. Kills its own food, but will eat carrion. Infinitely more audacious than the tiger, it regularly infests villages and mofussil stations, carrying off sheep, goats, dogs, and even poultry, while it

frequently attacks human beings, and there are many well authenticated instances of it having turned man-eater.

Measurements.—Average length of the larger variety (Panther), 7 feet; of the smaller variety (Leopard), 6 feet 4 inches. The leopard, in fact, ranges from 5 to 8 feet, and the average height at shoulder is about 2 feet. The leopard takes about 3 years to arrive at full growth.

Record measurements.—The largest leopard on record, a magnificent beast, 9 feet 1 inch, was bagged in Kashmir by Mr. Lionel Inglis; another good specimen, 8 feet 5½ inches, was shot by Captain A. G. Arbuthnot at Bandipur, Kashmir, as mentioned in the *Sportsman's Book for India*. His Highness the late Maharajah of Cooch Behar shot many large specimens, including one of 8 feet 4 inches (*Asiam*), and among the records that follow are ten of 8 feet and upwards. Nowadays anything over 7 feet 6 inches may be considered a big leopard.

Length.	Tail.	Skull.	Height.	Weight.	Place.	REMARKS.
Ft. Ins.	Ft. Ins.	Inches.	Ft. Ins.	Lb.		
9 1	Kashmir	Lionel Inglis.
8 8	Chamba	Capt. M. B. P. Reeve, 68th
(skinned)						F.R.F.

Length.	Tail.	Skull.	Height.	Weight.	Place.	REMARKS.
Ft. Ins.	Ft. Ins.	Inches.	Ft. Ins.	Lb.		
8 5 $\frac{1}{2}$	Bandipur ..	Capt. A. G. Arbutnot. (<i>Sportsman's Book for India.</i>)
8 5	Sangli State ..	Lieut.-Col. H. C. Arnim, I.M.S.
8 3	Gachwal ..	A. P. Davis.
8 3	G. P. ..	Lieut. G. A. Hassells-Yates.
8 1	Goona ..	Maj. R. G. Bell.
8 1	Danga Gali ..	H. H. Hunter.
8 1	3 2	..	..	..	Kumoon ..	A. E. G. Casey, C.S.
8 0	Panna, G. I. ..	Lieut. E. R. Wakefield.
8 0	Tera ..	J. G. Faunthorpe.
7 11	Muzaffarnagar ..	J. G. Faunthorpe.
7 10	2 11	..	..	..	Sinde Vy., Kashmir ..	D. G. Cockburn.
7 10	2 11	..	Bellary ..	R. R. Lewis, R.A.M.C.
7 10	G. P. ..	Lieut. G. Shepherd, 53rd Sikhs.
7 10	Kashmir ..	Col. Turnbull.
7 9 $\frac{1}{2}$	Garvet, Kashmir ..	H. E. Mallandaine.
7 9	Belgaum ..	H. Murray.
7 9	Muzaffarnagar ..	J. G. Faunthorpe.
7 8	L. Burma ..	G. M. Turner.

Length.		Tail.	Skull.		Height.	Weight.	Place.		REMARKS.
Ft.	Ins.	Ft.	Ins.	Inches.	Ft.	Ins.	Lib.		
7	8	2	11½	10½	6½	..	..	Gir Forest	.. Col. L. L. Fenton. (<i>Girth</i> , 31½ inches.)
7	8	2	5½	..	..	160	..	N. Guzerat	.. Ditto. (<i>Girth</i> , 35½ inches.)
7	8	..	..	..	..	139	..	Terai	.. E. C. Allen.
7	8	..	..	..	..	..	..	Bellary	.. Lieut. W. J. Massy.
7	7½	..	..	..	..	..	..	Belgaum	.. A. S. Fitzgerald.
7	7	..	..	..	..	..	..	Nimar, C. P.	.. Lieut. R. D. Gardner.
7	6	..	..	..	..	..	..	Sudra	.. "M. C." (<i>Asian</i> , 98.)
7	6	..	..	..	..	..	..	Bagra, C. P.	.. W. Wright Neville.
7	6	3	2	..	..	..	..	Kumaon	.. A. E. C. Casey, c.s.
7	6	3	0	..	..	..	..	Guchwal	.. Ditto.
7	5	..	..	..	..	..	..	L. Burma	.. G. M. Turner.
7	5	2	9	Forearm 11	Girth 32	125	..	Pubna	.. C. A. Radice. (<i>Asian</i> .)
7	5	..	..	..	..	..	..	Ellichpur	.. Capt. A. I. R. Glasford.
7	5	2	11	Forearm 11	2 6	..	..	....	.. Capt. W. A. Whitehead, 3-1-11 Punjab Regt.
7	4	..	..	..	..	150	..	Terai	.. E. C. Allen.
7	4	..	..	..	..	..	..	Nasik	.. A. L. Ferguson. (<i>Asian</i> .)
7	3	..	..	..	..	140	..	Nilgiris	.. H. Norman. (<i>Asian</i> .)

Length.	Tail.	Skull.	Height.	Weight.	Place.	REMARKS.
Ft. Ins.	Ft. Ins.	Inches.	Ft. Ins.	Lb.		
7 3	..	..	..	..	Bellary ..	Lieut. W. J. Massy.
7 3	..	..	..	..	Kotah ..	R. D. T. Alexander.
7 1½	2 10	..	2 5½	..	Bakra Dwar ..	Lieut. W. L. Hogg.
7 0	..	..	..	..	Vindhya Hills, C. I.	Capt. B. H. Selby.

THE OUNCE OR SNOW LEOPARD.

Felis uncia.—Indian names: *Burrhel hay*, Himalayas; *Iker*, *Stian*, Tibet; *Phale*, Lepcha; *Safail cheeta*, Hind.; *Sah*, Bhutan; *Thurwag*, Kunawar. The "Snow Leopard" of sportsmen.

Habitat.—Throughout the Himalayas, never much below snow level, and found from 9,000 to 18,000 feet.

Description.—Pale yellowish grey, head, cheeks and back of neck covered with small dark spots changing to dark rings distributed over the body; belly yellowish white with dark spots towards the thighs; black ears with yellow tip; long bushy

tail ringed and spotted; dense fur and a well-marked short mane. Exceedingly destructive to game, but never attacks man; should be classed as vermin. It inhabits rocky ground and preys upon the sheep and goats of the herdsmen, and the ibex, markhor, tahr, and burriel; also upon the marmot, the hare and rodents.

Average length, about 7 feet; head and body, 4 feet; tail, 3 feet; height, 2 feet.

Lieut. A. B. Rombulow-Pearse shot a magnificent specimen of a snow leopard in the Paitasun nullah, Kila Drosh District, Chitral, measuring 8 feet 8 inches, which is the best recorded.

THE CLOUDED LEOPARD.

Felis nebulosa.—Indian names: *Pungmar*, Lepcha: *Kung*, Bhutia; *Lamchitia*, Nepal.

Habitat.—South-Eastern Himalayas, Sikkim, Bhutan, Assam Hills, Burma, Siam, and the Malay Peninsula, at moderate elevations, not above 7,500 feet. It is arboreal in its habits and preys upon birds and small mammals. It is easily tamed.

Description.—Ground colour greenish brown, or dull clay brown, pale tawny in lower parts, sometimes almost white, with a double line of small stripes from

the ears backwards ; irregular clouded patches on the back and sides edged dark and crowded together ; smaller patches and spots on the belly and loins ; the cheeks and sides of neck black lined ; black band across the throat ; tail long and bushy with dark rings. Bulky and powerfully built, with very strong claws.

Measurements.—About 3 feet ; tail, 2 feet 10 inches ; height about 14 inches.

THE MARBLED CAT.

Felis marmorata.—Indian names : *Sikmar*, Bhutia ; *Dosal*, Lepcha.

Habitat.—Sikhim and the Eastern Himalayas, Assam, Burma and the Malay Peninsula.

Description.—A shy but fierce animal, though little or nothing is known of its habits ; it is probably arboreal. Larger than the domestic cat, with thick soft fur ; short rounded ears. Ground colour brownish grey to bright yellow, with paler lower parts. Large irregular dark patches with dark edges on the sides and divided by narrow pale streaks. Angular black blotches on the back, arranged in longitudinal bands, chest and inside of limbs banded and spotted, cheeks striped. The under-fur is rich brown.

Measurements.—2 feet 6 inches.

THE GOLDEN CAT.

Felis temmincki or *Felis aurata*.

Habitat.—Same as the Marbled Cat. Its habits are unknown, and it is extremely rare.

Description.—Deep chestnut, dark bay along the back, paler on the sides, whitish below. There are the usual cheek stripes of buff, edged with black; round dusky spots on the breast and on the inside of the fore limbs. Ears dark brown or black. Fur brown at the base, chestnut near the end, black tips on the back.

Measurements.—Head and body, 31 inches; tail, 19 inches; height at shoulder, 17 inches.

THE FISHING CAT.

Felis viverrina.—Indian names: *Mach biral*, Beng.; *Bagdashu*, *Khupia bagh*, Hind.

Habitat.—Bengal, Orissa and throughout the Gangetic plain; the Southern Malabar Coast, the base of the Western Himalayas and Burma. Is found in marsh land and thickets bordering rivers, swamps and creeks. Is exceedingly savage:

feeds principally on fish and molluscs, occasionally devours snakes, and will even destroy calves, lambs and dogs.

Description.—Colour variable, from earthy grey with a brownish tinge to almost dark brown; paler or almost white below and spotted throughout with black or dark brown elongated spots. Forehead to nape of neck lined with lines of spots down the back; cheeks greyish white; throat and fore-neck banded; markings on limbs variable; lower part spotted; tail ringed.

Measurements.—Head and body, 30 inches; tail, 11 inches; height, 15 inches. Weight, 20 lb.

THE LEOPARD CAT.

Felis bengalensis.—Indian names: *Cheeta billee*, Hind.; *Ban biral*, Beng.; *Wagati*, Western India; *Thitkyoung*, Burma.

Habitat.—The Hinnalayas, Bengal, Assam and Burma, the Western Ghats and Southern India. It is found in forests and preys on birds and small quadrupeds, and extracts toll from village poultry. Excessively savage and untameable.

Description.—Colour very variable; the ground colour ranges from rufous to grey, under-parts white, body covered with elongated well-defined spots, partly black and partly brown and variable in size. Black and brown bands over the

forehead and down the neck, continued in bands or lines of spots down the back ; tail spotted on the upper surface, the lower surface is usually unspotted. A white band running from inside each eye to the forehead ; two well-marked horizontal cheek stripes, neck and breast striped.

Measurements.—Head and body, 24 to 26 inches ; tail, 11 to 13 inches.

THE RUSTY SPOTTED CAT.

Felis rubiginosa.—Indian name : *Namali pilli*, Madras.

Habitat.—Southern India and Ceylon. More tractable than most of the wild cats, and not difficult to tame ; exceedingly active, playful and elegant in its movements.

Description.—Ground colour on back and sides reddish grey, below white, body and limbs sparsely spotted with brown ; four black lines run from forehead to past the shoulders, from which they are continued in the form of spots. Cheek stripes and throat bands as usual ; tail rufous grey and not spotted or striped.

Measurements.—Head and body, 16 to 18 inches ; tail, 9 to 10 inches.

PALLAS CAT.*Felis manul.*

Habitat.—Tibet and Ladak, Siberia and Mongolia. It lives among rocks and deserts, and preys on small animals.

Description.—It is about the size of a domestic cat. Fur soft, long and very thick. The skull is remarkably broad for its length. Colour silvery grey to yellowish buff; brown breast, lower parts white. Indistinct black transverse stripes, narrow and far apart, across the loins; narrow black rings on tail which is tipped black.

Measurements.—Head and body, $18\frac{3}{4}$ inches; tail, $8\frac{1}{2}$ inches; height, 9 inches. Weight, 6 to $7\frac{1}{2}$ lb.

THE INDIAN DESERT CAT.*Felis ornata.*

Habitat.—Western India from the Punjab to Nagpur; rare south of the Nerbudda; common in Sind and Rajputana. It inhabits sandy plains and sand-hills, and is not found in wooded country. Is by no means nocturnal.

Description.—Size of a domestic cat, fur short, tapering tail, ears well developed and pointed. Of a very pale sandy ground colour, with small black round spots on the body, with smaller elongated spots on the crown and nape, running into longitudinal bands. Lower parts pale rufescent and sparsely spotted black. Tail with small black transverse bands, which form rings towards the end; black tip.

Measurements.—Head and body, 18 to 22 inches; tail, 9 to 10 inches; height, 9 inches.

THE WAVED CAT.

Felis torquata.

Habitat.—Uncommon, but widely dispersed throughout Northern India. Probably the progenitor of the Indian domestic cats.

Description.—About the size of a domestic cat, tapering tail, about half the length of the body and head, ears rounded. In colour ash gray, varying to brown with lower parts buff. Narrow longitudinal dark bands run along the crown and back. There are interrupted brown or black transverse bands or rows of spots on

the sides. Neck has cross-bands; breast and abdomen unspotted. The usual cheek markings are found. Tail has black rings and a black tip.

Measurements.—Head and body, 20 to 22 inches; tail, 10 to 12 inches.

THE JUNGLE CAT.

Felis chaus.—Indian names: *Jungli billee*, Hind.; *Ban biral*, Beng.; *Cheerapuli*, Malabar; *Kyoung-tse-kun*, Burma; *Manjar*, Kurku; *Warkra*, Gond.

Habitat.—The common wild cat of India, from the Himalayas to Cape Comorin, from 8,000 feet to sea-level. Found in Ceylon and Burma, also the Andaman Islands. It frequents jungles or open country, is partial to grass, reeds, or cultivation cover, infests villages, preys on birds and small mammals, especially partridges, pea-fowl and hares. It is very savage and is generally untameable. It often breeds with the domestic cat, the litter frequently resembling it in colouring. It breeds twice a year, and has three or four young at a time.

Description.—Larger than a domestic cat, with long-haired ears and short tail. In colour it varies from sandy grey to brown; dark rufescent back, lower parts much lighter. The limbs are sometimes transversely barred, sometimes not; the

inside of the forearm usually has two broad dusky bands. The tail is ringed with black near the end, and the tip is black. In adult specimens there are seldom any markings on the body.

Measurements.—Head and body, 22 inches; tail, 10 to 11 inches; height at shoukler, 16 inches. Weight, 14 lb.

THE CARACAL.

Felis caracal—Indian names : *Siyah-gosh*, Hind. ; *Tsoyde*, Tibet ; *Ech*, Ladak.

Habitat.—Tibet, the Punjab, Sind and U. P. Unknown in Bengal and the Eastern Himalayas. Little is known of its habits. It is said to prey on gazelles, small deer, hares, and birds. It is easily tamed, and can be trained to catch the animal on which it preys—a sport favoured by certain Indian princes.

Description.—The colour varies from rufous fawn to brown; lower parts paler rufous or white, with indistinct rufous spots. Tip of the tail sometimes black. Ears black outside, white inside. A white spot below each eye.

Measurements.—Head and body, 26 to 30 inches; tail, 9 to 10 inches; ear, 3 inches; height, 16 to 18 inches.

Lieut. G. E. S. Watson sends me the measurements of a fine specimen shot by him at Taghlakabad near Delhi:—Length between uprights, $42\frac{1}{2}$ inches, nose to tip of tail; tail only, 11 inches; height at shoulder, $20\frac{1}{2}$ inches; girth of forearm, $5\frac{1}{4}$ inches.

THE LYNX.

Felis lynx or *Felis isabellina*.—Indian name : *Patsalan*, Kashmir.

Habitat.—The Upper Indus Valley, Kashmir, Gilgit, Ladak and Tibet, at heights above 5,000 feet. It is extremely savage, very destructive to sheep, while it preys on all animals and birds it is able to kill. Its keenness of sight and hearing is remarkable. It is an excellent climber and drops on its prey from trees. It has two or three young at a time, the cubs being born blind. Young animals are easily tamed.

Description.—The colour is pale grey to reddish fawn. In summer there are small black spots on body, but the winter coats are unspotted save for faint markings on the flanks and limbs.

Measurements.—Head and body, 33 to 35 inches; tail, 7 to 9 inches. Weight, about 60 lb.

THE HUNTING LEOPARD.

Cynilurus jubatus or *Felis jubata*.—Indian names: *Cheetah*, *Luggor*. Yuz, Hind.: *Cheetah bagh*, *Kendua bagh*, Beng.; *Cheetah-puli*, Tel.; *Chircha*, *Sivungri*, Canarese.

Habitat.—Northern India, Punjab, Rajputana, Central India, Central Provinces and almost up to Bengal.

Period of gestation.—Uncertain, probably same as the leopard.

Description.—Tawny yellow ground on sides, rufous fawn above, spotted almost over the entire body with round black spots (not rings as in the leopard and not arranged in rosettes). Chin, throat and belly buffy white, unspotted. Short black ears with tawny base and margins. Tail spotted near the root and merging into rings towards the tip, and more than half the length of the head and body. The young are grey and spotted only on the under-fur. Skull high and broad, muzzle short. The claws are semi-retractile. It is about the length of the leopard, but stands higher, and the limbs are longer and more slender. It is easily tamed and used in the chase of antelopes, chiefly the black buck, and it inhabits the low rocky hills surrounding the plains on which antelopes are found.

Measurements.—Average height at shoulder, 2 feet 7 inches; average length from head to root of tail, 4 feet 6 inches; average length from tip to tip, 7 feet.

THE STRIPED HYÆNA.

Hyæna striata.—Indian names : *Lugger bagha*, *Lakar bagh*, *Lakra*, *Hondar*, Hind. ; *Renhra*, Central India ; *Dumulgundu*, Tel. ; *Reddal*, Kurku ; *Dhopetcha*, Goud. ; *Jarak*, Kathiawar ; *Taras*, Deccan.

Habitat.—Throughout India, rare in forests, common in hilly open country. Abundant in Central and North-Western India ; infrequent in Bengal. It haunts rocky hills and deep ravines, lies up in caves, or in holes dug by itself.

It is nocturnal and usually solitary in its habits. It feeds on carrion and has extremely powerful jaws and teeth. Will occasionally seize sheep, goats, or dogs.

Its excreta dries into hard white balls, known as *alba græca*, chiefly composed of fragments of bone, and so indestructible that they have been found fossilized in caves formerly tenanted by extinct animals. The hyæna is extremely cowardly and rarely attempts to defend itself. It can be tamed, and generally has three or four at a litter.

Description.—Dirty grey, with narrow transverse tawny or blackish stripes on body and legs. It has a crest or mane, its hind legs are shorter than the fore, are considerably bent, and the hind feet are much smaller than the fore feet.

Measurements.—Head and body, 3 feet 6 inches ; tail, 1 foot 6 inches. Weight from 60 to 80 lb.

THE INDIAN WOLF.

Canis pallipes or *Canis lupus*.—Indian names: *Bheriya*, *Hondar*, *Bighana*, Hind.; *Torab*, Tel.; *Landga*, Deccan; *Birghira*, Gond.; *Nar*, Kathiawar.

Habitat.—Throughout India; Tibet; rare in Lower Bengal, rarely found in the Himalayas; it frequents open plain country, is rare in wooded districts and amongst hills. It is somewhat gregarious, six or eight being the largest packs recorded. It is very silent, sometimes barks; but rarely, if ever, howls. It lives upon mammals, birds, and will carry off children, sheep and goats, and will even attack man. It eats carrion readily and will even consume vegetable substances; is chiefly nocturnal and breeds in thickets or holes in the ground. Young wolves are easily tamed. It is extremely cunning and bold, and has both speed and endurance.

Period of gestation.—Sixty-three days; four to nine at a litter, are born in spring or early summer.

Description.—Fulvous grey with a brown tinge sometimes mixed with black on the back. Lower parts dingy white. The young are sooty brown with a white chest spot, which disappears six weeks after birth, when a dark collar appears below the neck, but is lost at maturity. The Thibet and Ladak variety is very pale in colour and woolly in coat, and is commonly known as *Canis laniger*.

Measurements.—Head and body, about 3 feet ; tail, 16 to 17 inches. Weight, 40 to 45 lb. A fine specimen, shot by Capt. S. H. Charrington, at Muttra, measured 4 feet 6 inches from nose to tip of tail. Another, shot by Lieut. E. A. S. Watson at Taghlakabad, near Delhi, was half an inch longer.

THE JACKAL.

Canis aureus.—Indian names : *Gidar*, *Seeal*, *Pheaow*, Hind. ; *Kolea*, Deccan ; *Kalla-nari*, Tamil ; *Nakka*, Tel. ; *Mye-khwe*, Burinese ; *Kolial*, Gond.

Habitat.—Throughout India, in hills, plains, forests and cities.

Period of gestation.—Sixty-three days ; usually four at a litter.

Description.—Rufous, inclining to black above, paler below ; under-fur brown ; tail reddish brown with a black tip. The jackal is subject to albinism and melanism, and is particularly liable to attacks of rabies.

Measurements.—Very variable ; an average male measures 28 inches head and body ; tail about a foot. Weight from 18 to 22 lb.

THE INDIAN WILD DOG.

Cyon dukhunensis or *Cyon rutilans*.—Indian names : *Son-kutta*, Kashmir; *Bunkutta*, *Jungli-kutta*, Hind.; *Vutai-karan*, Tamil; *Reza-kutta*, Tel.; *Bhansa*, Himalayas; *Donga-ceeta*, Kurku; *Donga-naik*, Gond.

Habitat.—Along the Himalayan forests from Kashmir to Assam, and in most of the larger forests of the Peninsula.

Period of gestation.—Sixty-three days; it breeds in the winter.

Description.—From rusty red to light brownish grey, lower parts paler, dorsal hair with dark tip, light under-fur, tail generally black tipped. The young are sooty black throughout. It is absolutely predatory in its habits, and is undoubtedly the most inveterate game destroyer in the country. It hunts in packs, in couples and singly, and will eat carrion and vegetable matter. It is extremely shy of man and usually runs mute. It should always be shot at sight. It is perfectly untameable. Special efforts should be made by Government and sportsmen to reduce the number of these pests, they are most prolific and are extirpating game *all over India*.

THE INDIAN FOX.

Vulpes bengalensis.—Indian names : *Lomri*, *Lom*, *Lokri*, Hind.; *Khekar*, Behar; *Khenk seel*, Beng.; *Konkanaka*, Tel.; *Kakeree*, Gond.; *Quoi-quoi*, Kurku.

Habitat.—Throughout India, except in thick forest. Unknown in Burma.

Period of gestation.—Uncertain; it breeds from February to April, the litter usually numbering four.

Description.—It varies a good deal in colour from reddish grey to silver grey; the back is darker than the sides, the lower parts are whitish, the chin pure white shading to a creamy hue on the breast, tail shading from rufous grey to a black tip. It preys upon small mammals and birds, reptiles, insects and eggs; it also eats fruit and grain. Its scent is not strong, and it is not often hunted; it is very quick, active and graceful, and is easily tamed.

Measurements.—Head and body, about 20 inches; tail, 13 to 14 inches. Weight, 6 to 8 lb.

THE BROWN BEAR OR SNOW BEAR.

Ursus isabellinus or *U. arctus*.—Indian names: *Lal bhalu*, Hind.; *Harput*, Kashmir; *Drengmo*, Balti; *Deub*, Nepal; *Drin-mor*, Ladak.

Habitat.—The Himalayas from Afghanistan to Nepal.

Period of gestation.—About six months; the cubs, usually two, are born in April or May.

Description.—From pale to dark brown; claws pale or white and of moderate length. Fur long, thick and soft with woolly under-fur, the hair on the back

varying from 5 to 8 inches in length. In summer it haunts the grass slopes close to the snow: in spring and autumn it comes lower down; it hibernates in winter, reappearing about March or April. Roots, fruits and seeds, grass and herbs, nuts and grain form its chief diet, though it will eat the flesh of animals it has killed and has been known to feed on carrion. The sight and hearing are dull, but the sense of smell is good. It rarely climbs trees, but can do so, and at a pinch can cover the ground at a good pace. This bear is shy and harmless and rarely attacks, even when wounded.

Measurements.—Variable. The males are much larger than the females. Average length from snout to tail, somewhat less than 6 feet; height at shoulder, 3 feet.

GOOD SPECIMENS.

Length.		Place.			REMARKS.
Ft.	Ins.				
7	8	Kashmir	..	..	W. Graham.
7	6	Chumba	..	..	G. Wilkinson.
7	5	..	..	..	T. W. Houghton.
7	4	Kashmir	..	..	Maj. R. G. Burton.
7	4	Chumba	..	..	Capt. M. B. P. Reeve, 58th F.R.F.
7	1	Do.	..	..	Lieut. C. Shepherd, 53rd Sikhs.

•THE HIMALAYAN BLACK BEAR.

Ursus torquatus or *U. thibetanus*.—Indian names : *Bhaloo*, *Reech*, Hind. ; *Harpur*, Kashmir ; *Hingbong*, Nepal ; *Dom*, Bhutia ; *Sona*, Lepcha ; *Musa-bhurma*, Assam ; *Wek-won*, Burmese.

Habitat.—Throughout the Himalayan forests with the frontier of Persia as its western and Assam as its eastern limits.

Period of gestation.—Six months. The young, usually two, are born in the spring, and are blind for some time.

Description.—Moderate size, hair of medium length, no under-fur, claws short, strong, curved and black, the colour is uniformly black with an inverted white horse-shoe mark on the chest and white on the chin. It subsists chiefly on fruit, grain and roots and honey, and is a good climber. It also kills sheep, goats and deer, and occasionally feeds on carrion. It hibernates partially. It is very savage, and will charge home when wounded ; its sight and hearing are sharp and its powers of scent remarkable ; it covers the ground rapidly, and is an excellent swimmer.

Measurements.—From 4 feet 8 inches to 5 feet 5 inches, from nose to rump. Weight, 200 to 300 lb. Very fat bears have been known to scale up to 450 lb.

Length.		Girth behind forearm.		Girth of forearm.	Place.	REMARKS.
Ft.	In.	Ft.	In.	Inches.		
7	2	3	7	....	Chamba ..	Capt. M. B. P. Reevo, 58th F.R.F.
6	7	3	6	....	Jammu ..	Capt. W. A. Whitehead, 3-1st Punjab Regt.
6	7	3	3	....	Kashmir ..	Col. L. L. Fenton.
6	5	3	4	19½	Ditto ..	Ditto.
6	4	....	....	....	Ditto ..	Col. A. E. Ward.
6	0	....	....	....	Ditto ..	Ditto.
6	0	....	....	....	N. Shan States ..	G. M. Turner.
6	0	....	....	....	Barmoor, Chamba ..	Maj. G. M. Priestly.
6	0	....	....	....	Sandrin Valley ..	Maj. R. G. Cherry, R.F.A.
5	10	....	....	....	Saranpur, C. P. ...	W. Wright Neville.
5	0	3	0	21. Weight, 450 lb.	Ditto ..	C. Donald.
5	8	3	8	15	N. Shan States ..	G. M. Turner.
5	7	3	8	18	Ditto ..	Ditto.
5	7	....	....	....	Sandrin Valley ..	Maj. R. G. Cherry, R.F.A.
5	5½	....	....	....	....	H. M. Hamay.

Length.	Girth behind forearm.	Girth of forearm.	Place.	REMARKS.
Ft. Ins.	Ft. Ins.	Inches.		
5 5	.....	.....	U. Ghindwin ..	D. H. Allan.
5 5	.....	.....	.....	A. L. Atkinson.
5 4	.....	17 $\frac{1}{2}$. Weight,	Pannurehat, Assam	El. M. Lepage.
		293 lb.		
5 4	3 5	17. Weight,	Kashmir ..	C. Donald.
		280 lb.		
5 2 $\frac{1}{2}$	3 11 $\frac{1}{4}$	.....	Kajna ^g ..	B. H. Selby.
5 1	.....	.....	U. Ghindwin ..	D. H. Allan.
5 0 $\frac{1}{2}$	2 11 $\frac{1}{2}$	18	.....	Col. L. L. Fenton. (Female.)
5 0	.....	.....	U. Ghindwin ..	D. H. Allan. (Female.)

THE SLOTH OR INDIAN BEAR.

Meursus ursinus, *Ursus labialis*.—Indian names, same as the Himalayan Black Bear: *Bana*, Kurku; *Ooryal*, *Yerd* and *Asol*, Gond.; *Kardi*, Canara; *Plugu*, Telegu.

Habitat.—Throughout the Indian Peninsula, from the base of the Himalayas to Cape Comorin and Ceylon, chiefly in hilly and jungly districts.

Period of gestation.—Between six and seven months. The young are born usually in December or January, are generally two in number, and are blind for the first three weeks.

Description.—Long and coarse black hair, longest between the shoulders. Muzzle dirty grey; a narrow white horse-shoe mark on the chest. Claws white. It is found solitary or in pairs, or a female with two cubs. It inhabits bush and forest jungles and hills; is particularly partial to caves; is nocturnal in its habits and does not hibernate. It is a clumsy climber and slow in its movements. It feeds almost entirely on fruit, honey and insects, especially white ants. It has great powers of suction and wind propelling from the mouth which enable it to procure the larvæ and ants, of which it is particularly fond. It is also partial to the juice of the toddy palm and is on rare occasions found in a state of intoxication. It has bad eyesight and its hearing is by no means good, but its sense of smell is acute. It is tolerably silent as a rule, but is extremely noisy when wounded. It is timid, but at bay will attack with teeth and claws, paying special attention to the head and face of its foe.

Measurements.—Head and body from 4 feet 6 inches to 5 feet 8 inches; tail, 4 to 5 inches without hair; height at shoulder, 2 feet 2 inches to 2 feet 9 inches. Weight from 170 to nearly 300 lb.

Length.		Girth.		Place.		REMARKS.
Ft.	Ins.	Ft.	Ins.			
$\frac{1}{2}$ 7	1	4	$4\frac{3}{4}$	Bakra Duar	..	Lieut. W. L. Hogg.
6	10	....	....	Kas. Bombay	..	Lady Jenkins.
6	4	....	....	G. P.	..	Late G. Greed.
6	2	....	....	Kas. Bombay	..	Lady Jenkins.
6	$0\frac{1}{2}$	....	....	Bamra, C. P.	..	R. D. T. Alexander.
6	$9\frac{1}{2}$	....	....	N. Kanara	..	Lieut. B. H. Selby.
5	$8\frac{1}{2}$	3	8	G. India	..	W. H. Pitt.
5	$8\frac{1}{2}$	....	....	N. Kanara	..	Lieut. B. H. Selby.
5	8	....	....	Ditto	..	Ditto.
5	$5\frac{1}{2}$	3	10	N. Circars	..	W. H. Pitt.
5	4	....	....	Berar	..	Capt. A. I. R. Glasford.
5	3	....	....	N. Circars	..	W. H. Pitt.
5	0	....	....	Chanda	..	Capt. S. H. Charrington.

THE MALAY BEAR.

Ursus malayanus.—Indian names : *Wek-won*, Burmese ; *Bruang*, Malay.

Habitat.—Chittagong and the Garo Hills, Tenasserim, Arakan and throughout Burma.

Description.—Small size. Fur short and coarse ; well curved claws ; very long tongue. In colour black with brownish parts ; muzzle often whitish, crescent patch on chest, white, yellow or orange. Its habits, food and character are practically those of the Indian Bear.

Measurements.—Head and body, about 4 feet ; tail, 2 inches. Weight from 60 to 130 lb.

THE INDIAN ELEPHANT.

Elephas indicus.—Indian names : *Hathi*, *Hathni* (female), Hind. ; *Harst*, Kashmir ; *Aruner*, Southern India ; *Mongma*, Garo ; *Miyung*, Cachar ; *Tsheng* or *Shank*, Burma ; *Anay*, Canarese ; *Guj*, Beng.

Habitat.—In the forest land of the Himalayas from Dehra Dun eastwards, in Assam, in the Western Ghats, in Mysore and Travancore, and in the forest country between the Ganges and Kistna, and in Burma.

Period of gestation.—Nineteen months ; they breed in captivity quite freely when permitted opportunities of doing so. The young are generally born in the autumn, a single one as a rule, twins being very rare. The young at birth weighs about 200 lb., and is about 3 feet high. An elephant is full grown at 25 years of age

and lives in captivity to a hundred years, and probably half as long again in a wild state.

Description.—In colour blackish grey throughout, the forehead, trunk and ears being often mottled flesh colour. It is almost hairless, but has two rows of coarse hairs at the tip of the tail, five toes or hoofs on each forefoot, four on each hind foot. The males are usually tusked, tuskless males being called *muknas*. The elephant lives in herds varying in number from ten to a hundred. Solitary males and rogues are common, though rogues often belong to a herd. The leader of a herd is invariably a female, and different herds do not mix. They live chiefly on grass, leaves and shoots of bamboos, wild plantains, small branches, stems and leaves of trees, and a full grown elephant consumes between 600 and 700 lb. of green fodder per day. They drink twice a day, after sunrise and after sunset; they feed the greater part of the day and night, resting from 9 a.m. to 3 p.m. and from 11 p.m. to 3 a.m. They lie down to sleep. In marching they keep in strict Indian file; they are fond of bathing and wallowing. Their sight and hearing are not acute, but their sense of smell is highly developed. They are incapable of jumping vertically or horizontally; they can climb very steep places and are excellent swimmers, though their pace is not rapid. They produce a variety of sounds,—a shrill trumpet, a roar, a rumbling growl, a low squeak and make a metallic sound by beating the end of the trunk on the ground while blowing through it; this they usually do in the presence of tiger. Though individuals are vicious, elephants are timid and

inoffensive as a rule. In charging, the trunk is tightly coiled, and the head is thrown up, the feet and tusks being used in attacking their adversaries. They are docile and obedient in captivity; but not so intelligent as is usually imagined.

Elephants are shot, noosed, caught in pits or in *khealdahs*. To kill an elephant stone-dead the brain must be reached and this lies far back in the head, exactly between the orifices of the ears. A facing shot, if standing on same level, should be placed low in the rounded bump or "boss," which is conspicuous on the forehead and just above the trunk. A facing shot with the animal on a lower level than the hunter must be placed in the concavity just above the "boss." If the animal is standing three-quarter face to the hunter with only one eye visible, the shot must be placed between the eye and the orifice of the ear. If the animal is broadside on, shoot straight into the orifice of the ear. If he be standing with his head three-quarters from you with an eye still visible, shoot behind the ear when he flaps it forwards, just on a level with the orifice. It is essential to get as close as possible.

Measurements.—Twice the circumference of an elephant's forefoot gives almost exactly the height at the shoulder. Adult males do not as a rule exceed 9 feet, females 8 feet. The tusks vary greatly in length and weight, from 8 feet down to a few inches, and weigh anything up to 150 lb. a pair.

Record measurements.—That good sportsman, inaccurate observer and eccentric vegetarian faddist, the late G. P. Sanderson, in *Thirteen Years among the Wild Beasts of India*, scouts the idea of a 10-foot elephant and declares 9 feet 10 inches to be the largest he ever saw— and he saw many hundreds. Maj.-Gen. A. A. Kinloch gives the height of one he shot at 10 feet 1 inch and in Sterndale's *Mammalia* we have one of 10 feet 7 inches which is the alleged height of the famous Bulrampore fighting elephant of bygone years. At the Bulrampore Zoo there is the *skeleton* of an elephant which tapes exactly 10 feet 6 inches at the shoulder.

Mr. T. Dixie, District Engineer, Chaibassa, sends me the following measurements of a rogue he shot at Jagernathpur, 29 miles south-west of Chaibassa on the 14th December, 1917. It was an enormous beast and unfortunately he was unable to measure the actual height at the shoulder, as, when shot, the animal fell with his legs doubled up under him and it was found impossible to heave him over. The measurements of the forefeet after being cut off were—diameter $20\frac{1}{2}$ inches, circumference 5 feet $4\frac{1}{2}$ inches. This, according to Sanderson, makes the height at shoulder 10 feet 9 inches. The tusks are each 6 feet $8\frac{1}{2}$ inches long, 1 foot 6 inches in circumference, and weigh $170\frac{1}{2}$ lb. to the pair. The elephant was an exceedingly old animal and his grinders were worn down almost smooth. He was blind of his right eye and had a very large hole in his right side, which was apparently caused in a fight when the other tusker had got on his blind side.

Writing to the *Indian Field* on the 20th October, 1907, of a huge tusker shot by him in the Monywa District, Upper Burma, Capt. G. P. Evans, of the Military Police, states as follows :—

“ Unfortunately I was unable to measure the height of this elephant at the shoulder, as, when killed, he fell in a peculiar position with his forelegs doubled up under him and his right tusk firmly embedded in the ground. This prevented the carcass from subsiding altogether, as doubtless it would otherwise have done.

The girth of the forefeet, measured with a steel tape after being cut off, is 5 feet 4 inches, both feet giving the same measurement to within a fraction of an inch. This should make the height of the elephant at the shoulder 10 feet 8 inches which seems enormous, but which, nevertheless, is probably within an inch or two of its actual height. I have never seen a bigger beast. He towered above his fellows and was considerably taller than a rogue killed in this district two years ago which measured 9 feet 9 inches at the shoulder.”

I give details of a 10 feet 5 inches specimen shot by Capt. S. H. Charrington, and of one that stood 10 feet 4 inches as recorded by Mr. J. N. Clough in the *Asian*.

Capt. Charrington's measurements give us the following results :— Height, 10 feet 5 inches ; circumference of foot, $61\frac{1}{2}$ inches ; tusks, 5 feet 8 inches and 5 feet

6 inches long and $14\frac{1}{4}$ inches girth; weight, $33\frac{1}{2}$ and $34\frac{1}{2}$ lb. respectively; shot in Coorg.

Mr. J. N. Clough, in the *Asian* of 9th May, 1896, gives the following measurements of a Burmese tusker shot by him in the Kyaito District:—Height, 10 feet 4 inches; right tusk, 7 feet $9\frac{1}{2}$ inches; left tusk, 8 feet 6 inches; girth of right tusk, 1 foot $5\frac{1}{2}$ inches; ditto left tusk, 1 foot 5 inches; circumference of forefoot, 58 inches. Weight of right tusk, 72 lb.; ditto left tusk, 74 lb.

Mr. H. D. Deane, of Peermade, writes as follows of two big animals shot by him:—"In February 1905, I shot a rogue elephant near the Peermade Ghat Road at the 37th mile, where he had just killed a Mahomedan. His forefeet, measured the following morning, girthed 65 inches, his tusks were 5 feet 1 inch and 4 feet 9 inches, respectively, girthed in centre $17\frac{1}{2}$ inches, and weighed 58 and $49\frac{1}{2}$ lb., respectively. In April 1903, I shot another advertised rogue elephant near the Mount Estate, above the Periar River. His forefeet girthed 63 inches: he had one tusk 4 feet 10 inches, weighing 48 lb. Out of 14 elephants shot by myself in Ceylon and India during the last 20 years, these two had far and away the biggest foot measurement."

Mr. M. Hurst-Ray, of Mal, Dooars, in February 1912, shot a very fine specimen of a *mulna*, measuring 10 feet 4 inches at shoulder, which is probably the record for

a *mukoa*. He also writes me of a tame female elephant in his district measuring 9 feet 0½ inch at shoulder.

Mr. E. Pinches, of Jaipur, Assam, shot a *gunda* 10 feet 1 inch at Serai Pong, on 27th January, 1907, with a foot circumference of 60½ inches. With him were Messrs. Tweedie and Beveridge.

Elephants of 9 feet 7 inches (Sanderson), 9 feet 4 inches (Count Scheibler), have been recorded. Mr. J. E. Jenkins, Burma, sends me the following details of a tusker shot by him :—Height, 8 feet 10 inches ; tusks, 4 feet 7 inches each. Weight, 52½ lb. each.

One of the largest tuskers ever shot in the Dooars was bagged by Mr. G. McIntosh of the Newlands Tea Estate, Jalpaiguri, on 5th November, 1924. The following are measurements :—Height, 10 feet ; tusk, at thickest part, 1 foot 4 inches ; foreleg at toe, 5 feet ; tusks, round curve, 60 and 63½ inches.

The longest pair of tusks on record is thus described in the *Journal of the Bombay Natural History Society* :—Length, 9 feet 10½ inches and 9 feet 6 inches ; girth, 15¾ and 15½ inches ; a very long and slender pair. In the same publication Capt. S. S. Flower reports two other pairs :—(1) Length, 8 feet 3 inches and 8 feet 4 inches ; girth, 14½ inches each. (2) Length, 7 feet 8½ inches and 7 feet 8 inches ; girth, 16¾ and 16¾ inches.

Mr. C. S. Rogers, Burma Field Service, writing from Mogok in 1897, gives the length of a pair found in the Ruby Mines District (together with the remains of the elephant), as—right tusk, 6 feet 2 inches; left, 6 feet 5 inches; weight, 67 and 73 lb.; girth, 1 foot 5½ inches; the pair weighed 140 lb., and are thus heavier than the heaviest pair recorded by Sanderson in his *Thirteen Years among the Wild Beasts of India*, one of which was 8 feet and 1 foot 4·9 inches girth, and 90 lb. weight; and the other, which was diseased and broken, measured only 3 feet 3 inches and 1 foot 8 inches girth, weighing 49 lb., *vide* pages 62 and 63.

A pair in the possession of Mr. C. Daley, taken from an elephant shot in Raigarh, measured 6 feet 7 inches; girth, 17 inches. Weight, 65 lb. each.

Capt. G. P. Evans gives me the following measurements of a rogue elephant that had killed several people in Upper Burma: it is probably the record for Burma in recent years:—Height, 9 feet 9 inches; circumference of forefoot, 58½ inches; diameter, 19 inches. Left tusk, 4 feet 8½ inches; weight, 37 lb.; the right tusk had been eaten away by maggots. Capt. Evans' big tusker, shot in 1907, details of which have already been given, carried a pair of tusks that weighed 99½ lb.—right tusk, 4 feet 6 inches long; 16½ inches girth; weight, 42½ lb.; left tusk, 6 feet 4 inches long; 16½ inches girth; weight, 57 lb.

Mr. G. M. Turner shot a fine specimen in Upper Burma; height, 9 feet 4 inches; tusks, 5 feet ½ inch each; girth at gum, 18½ inches.

I am indebted to Mr. W. H. Pitt for the following interesting measurements:—

ELEPHANTS.								
Height (taken from fore-foot)	Girth of fore-foot.	Length of tusks.	Length from tip to gum.	Girth at gum.	Weight.		Locality.	REMARKS.
Ft. Ins.	Ft. Ins.	Ft. Ins.	Ft. Ins.	Inches.	lb.	lb.		
10 1	R. 5 6 $\frac{3}{4}$ L. 5 0 $\frac{3}{4}$	R. 6 3 $\frac{1}{4}$ L. 6 3	..	R. 16 $\frac{1}{8}$ L. 16 $\frac{3}{4}$	R. 52 L. 54 $\frac{1}{2}$	106 $\frac{1}{2}$	Orissa	Shot by R. D. T. Alex- ander.
9 10 $\frac{1}{2}$	4 11 $\frac{1}{4}$	R. 5 9 L. 5 11	R. 3 8 L. 3 9	R. 18 $\frac{1}{2}$ L. 18 $\frac{1}{2}$	R. 65 L. 62	127	Wynaad	Shot by W. H. Pitt.
..	..	R. 6 6 L. 5 8	..	R. 19 L. 16	R. 68 $\frac{1}{2}$ L. 44	112 $\frac{1}{2}$	Mysore	Shot by Maj. Goring, 3rd Hussars, and G. Theobald.
..	..	R. 6 6 L. 6 6	**	**	**	125	Wynaad	Shot by M. G. K. Waite.
9 2	R. 4 7 L. 4 7	R. 5 0 L. 5 4	..	R. 15 $\frac{3}{4}$ L. 15 $\frac{1}{2}$	R. 42 L. 43 $\frac{1}{2}$	85 $\frac{1}{2}$	Orissa	Shot by Dr. A. Martin Leake, v.c.

THE GREAT ONE-HORNED RHINOCEROS.

Rhinoceros unicornis or *indicus*.—Indian names : *Gainra*, Hind. ; *Gonda*, Beng.

Habitat.—Assam.

Period of gestation.—Seventeen or eighteen months, a single one being produced.

Description.—Skin naked, except on the tail and ears. The skin is divided into shields on the shoulders, over the neck, the centre of the body, the rump and the thighs, and is studded with convex tubercles. The colour is blackish grey throughout. The horn is well developed in both sexes. It inhabits grass jungles ; never ascends the hills, has a preference for swampy ground and wallowing. It is quiet and inoffensive, but when wounded or driven will occasionally charge home. It can trot and gallop at a fair speed. The day is passed in sleep, the feeding time being morning and evening. Its principal food is grass. It is very long lived and its flesh is excellent. It is easily killed, and a bullet from any ordinary sporting rifle will drop it dead at once. The spot to aim at, for the neck shot, is about half-way along and tolerably high up. The head shot, if successful, is a certainty, the shoulder shot should not be attempted unless with a large bore rifle.

Measurements.—Average height at shoulder, 5 feet 9 inches ; average horn measurement, 14 inches. Length from nose to root of tail, 10 feet 6 inches ; tail, 2 feet 5 inches ; girth, 9 feet 8 inches.

Record horn measurements.—There are only three authenticated records of over 20 inches—one of 24½ inches shot by Mr. Tom Briscoe in Assam, one of 24 inches credited to Jerdon, and one of a fraction over 21½ inches shot by Lord Curzon in the Nepal Terai. The late Maharajah of Cooch Behar shot and was at the shooting of a great many rhino, but his best record is about 16 inches. The horn of the huge specimen in the Indian Museum, Calcutta, is 13 inches. Mr. W. H. R. Doxat gives me the following dimensions of a specimen he got in Assam in 1903 :—Length of horn (front curve), 13 inches ; circumference at base, 21½ inches ; weight, 3 lb. 2 oz. ; circumference of foot, 33 inches. The record height at shoulder is 6 feet 6 inches—specimen shot by His Highness the late Maharajah of Cooch Behar, but this animal had a horn of only 13 inches. Another rhino shot by His Highness measured 6 feet 4½ inches at the shoulder, with a horn of 16½ inches. Mr. Briscoe's specimen measured 6 feet 4 inches at the shoulder.

THE SMALLER ONE-HORNED RHINOCEROS.

Rhinoceros sondaicus.—Indian names : *Gainra*, Hind. ; *Gonda*, Beng. ; *Kunda*, Naga ; *Kyeng*, Burma.

Habitat.—The Sundarbans, Eastern Bengal, from Assam throughout Burma and the Malay Peninsula.

Period of gestation.—Same as *R. indicus*.

Description.—Skin nearly naked, not tubercular, the epidermis is divided by cracks into small scale-like discs. The surface of the body is divided into shields by folds, but the neck folds are only slightly developed. The horn is small and always wanting in the female. Colour, dusky grey throughout. It inhabits tree forests and has been found at considerable elevations in Burma. It is a timid and inoffensive animal.

Measurements.—Smaller than *R. indicus*, and at the shoulder measures from 5 feet to 5 feet 6 inches. Mr. A. C. Green, some years ago, shot one in Assam which carried a horn of $10\frac{3}{4}$ inches; the horn of the specimen in the Calcutta Zoological Gardens is under 9 inches.

THE TWO-HORNED RHINOCEROS.

Rhinoceros lasiotis or *sumatrensis*.—Indian name: *Kyan*, Burma.

Habitat.—Occasionally found in Assam; it ranges to Siam, and is common in Sumatra, Borneo and the Malay Peninsula.

Period of gestation.—Nine months.

Description.—This is the smallest of the Rhinoceroses and the most hairy, the greater part of the body exhibiting sparse hairs, the ears and tail being the most hairy parts. The horns are slender and curved backwards. The skin is rough and granular; the folds being less marked than in the one-horned species. In colour, it varies from earthy brown to almost black. Its habits are similar to those of the other species; it inhabits forests and ascends to considerable heights. It is easily tamed even when adult.

Measurements.—The average height of adults is a little over 4 feet and the front horns range from 20 to 30 inches. The best specimen in the British Museum is about 32 inches.

THE GAUR.

Bos gaurus or *Gureus gaurus*.—Indian names : *Gauri guî*, Hind. ; *Gagal*, Orissa ; *Gaur*, Chota Nagpur ; *Khulga*, W. Ghauts ; *Ban boda*, Central India ; *Karhi*, Mysore ; *Mithun*, Assam ; *Pera-mao*, Gond ; *Gowai*, Kurku ; *Seloi*, Chittagong ; *Pyoung*, Burmese ; *Kad kona*, Canara. The Indian "Bison" of sportsmen.

Habitat.—Nearly all the great hilly forest tracts of India, Assam, Burma and Malay States.

Period of gestation.—Uncertain. It breeds in the cold season.

Description.—Very massive in form, deep body, small limbs and hoofs and large ears. A ridge along the back terminates about midway between shoulder and tail. It has thirteen pairs of ribs, the dewlap is almost undefined, the greenish yellow horns are flattened towards the base and curved throughout, the black tips being turned inwards and slightly backwards. Old males are almost black, younger animals are dark brown, young males and females being more rufous; the lower parts are paler, and the legs from above the knees and hocks to the hoofs are white. The muzzle is pale, and the head to the nape of the neck is ashy grey. The Gaur keeps to forest or high grass, but not always near hills; it is found in herds of from five to thirty, but the finest and oldest bulls are always solitary. They are shy and feed chiefly on grasses, though they often browse on the shoots and leaves of bamboos, feeding generally in the early morning and evening and lying up during the day and night. They drink in the afternoon. All attempts at domestication have failed, though a few have been more or less tamed I believe.

Measurements.—The average height at shoulder is 5 feet 9 inches; average horn measurement, 2 feet 7 inches; maximum horn measurement, 41½ inches.

Record measurements.—There are records of some very big Gaur, such as 6 feet 10½ inches (Col. Pollock), 6 feet 6 inches (R. M. Woods, Northern Bengal,

1904), 6 feet $1\frac{1}{2}$ inches (Sir W. Elliot, *Madras Jour.*, X, p. 227), and 6 feet 1 inch, girth, 9 feet $6\frac{1}{2}$ inches and length 12 feet $8\frac{1}{2}$ inches (Lieut. R. M. Brind). Sanderson, in his *Thirteen Years among Wild Beasts*, mentions one of 6 feet.

With regard to horns anything over 40 inches is seldom met with. In the measurements that follow there is one of $40\frac{1}{2}$ inches by Mr. H. Murray, Conservator of Forests, Belgaum, and in the *Asian* we find Mr. R. Dittmas, of the Wynaad, credited with one of 40 inches. "Mushaboo" in the same paper (12th August, 1884) mentions a Travancore head of 39 inches and 18 inches girth. Then there are some big Mysore heads—Mr. Mackenzie's $77\frac{1}{2}$ inches tip to tip across forehead; Mr. E. M. Van Ingen's 79 inches ditto, with a 40 inches spread; Surg.-Capt. C. H. W. Whitestone's 83 inches ditto, shot in 1897; and Mr. M. B. Follett's magnificent specimen 87 inches tip to tip across forehead, 44 inches sweep, and $24\frac{1}{2}$ inches between tips. Messrs. C. K. Martin and A. J. Boger, in May 1906, got a specimen that measured 85 inches—tip to tip across the forehead, the girth of the right horn was $21\frac{1}{2}$ inches, of the left $21\frac{1}{4}$ inches; the animal stood 18 hands. A very fine bull was shot in the jungles of the Keonjhar Feudatory State, Orissa, by the Superintendent, Mr. D. A. Macmillan; the measurements were—round sweep, $83\frac{1}{2}$ inches; tip to tip, 28 inches; girth at base of horn, 20 inches; widest outside spread, 42 inches; widest inside spread, 37 inches. A Travancore sportsman tells us that in the possession of His Highness the Maharajah there is a head the right horn of which measures over 43 inches, which equals His late Highness of

Cooch Behar's best trophy. The best head in the Indian Museum (presented by Sir A. Phayre) is only 32 inches and 18 inches circumference.

Length.	Girth.	Spread.	Round sweep.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.	Inches.		
44	19½	..	83	31	Nolambur, S. I. ..	Gordon Hadfield.
40½	20	..	..	..	Belgaum ..	H. Murray.
40	18	..	78	28	Mysore ..	G. E. M. Russell.
40	20½	44	..	23	Wynaad ..	F. Ditmas. (<i>Asian.</i>)
38½	18½	32½	72½	..	Kolhan, B. & O. ..	R. D. T. Alexander.
38	19	40	82	16	Myitkyina ..	W. S. Thom.
3½ ft.	19½ ft.	53	86	..	Assam ..	E. C. Stuart Baker, F.Z.S.
37 rt.	19½ rt.					
36½ rt.	22½ rt.					
33½ ft.	22½ ft.					
36½	19½	30½	68	20½	Mandla ..	R. D. T. Alexander.
36	..	46	..	..	W. Ghauts ..	G. Hadfield.
36	18	46	..	20	Travancore ..	H. T. Deane. (<i>Madras Museum.</i>)
36	22½	42	..	19½	Ditto ..	Ditto.

Length.	Girth.	Spread.	Round weep.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.	Inches.		
36	20	44	..	22	Cochin	J. D. Watson. (<i>Asian.</i>)
35	21½	44	..	..	Travancore ..	H. T. Deane.
34	18	..	..	23	Jalpaiguri ..	"Shikari." (<i>Asian.</i>)
34	21	<div style="display: inline-block; vertical-align: middle;"> <div style="display: inline-block; vertical-align: middle;">33</div> <div style="display: inline-block; vertical-align: middle;">inside</div> </div>	<div style="display: inline-block; vertical-align: middle;"> <div style="display: inline-block; vertical-align: middle;">46½</div> <div style="display: inline-block; vertical-align: middle;">out-side</div> </div>	25	Palney Hills. Madura.	J. S. Scot.
34 rt.	17½ rt.	45	86	29½	Bombai	C. J. Balding. (<i>Right tip much damaged.</i>) Maharaja of Mourbhanj.
32 ft.	15½ ft.	40½	85½	38½	.....
32½	17	39½	..	..	Bilaspur, C. P.	A. M. Leake, v.c.
32½ rt.	17½ rt.	39½	..	..	..	..
32½ ft.	18 ft.	39½	..	..	..	..
32	20	38½	77	23½	S. India	Capt. S. H. Charrington.
32	20½	32	79	9½	S. Madras ..	Ditto.
32	20	38½	77	23½	Ditto	Ditto.
32	18	..	..	22	Burma	Indian Museum.
31½ rt.	22½ rt.	47	75½	..	Assam	E. C. Stuart Baker, F.Z.S.
31 ft.	22½ ft.	47	75½	..	Assam	E. C. Stuart Baker, F.Z.S.

Length.	Girth.	Spread	Round sweep.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.	Inches.		
31½ rt. l	18¾	..	..	..	.....	Maj G. P. Evans.
30½ 1ft. l	20	27	69	13½	Burma ..	C. B. Moggridge.
30¾	20¾	41	..	..	Palmair Hills	J. P. Cool.
30	17	33	72	24½	N. Canara	Maj. C. M. Priesley.
29½	20½	38½	..	25	Assam ..	Capt. A. L. M. Molesworth.
29½	20	30½	..	26½	Burma ..	C. B. Moggridge.
29	19½	36	..	24	Bongal ..	Lieut. R. M. Brind.
29	17½	31	..	20	Burma ..	C. B. Moggridge.
28½	20½	34½	74½	26	U. Burma	Lieut. R. B. N. Wood.
28½	20	..	..	..	S. Madras	Capt. H. R. Milvinn.
28½	19	39	..	..	Orissa ..	J. E. Huggins. (Asian.)
28½	..	38½	..	..	Poornand, Travancore.	R. E. Hartman.
27½	16½	38	72	27½	Bhutan Duars	R. M. Woods.
27½	17½	29½	..	18½	U. Burma	Lieut. G. Elliot.
27	19½	26	65½	17	Ditto	Capt. G. P. Evans.
27	16	27	..	27	Bhutan Duars	R. M. Woods.
27	..	..	..	..	Jugner ..	Capt. A. Macleavish, 3rd Brahmans.

Length.	Girth.	Spread.	Round sweep.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.	Inches.		
26 $\frac{1}{2}$	18	31	..	25 $\frac{1}{2}$	Jagner ..	Lieut. C. Elliot.
26 $\frac{1}{2}$	17	35	..	26	Pegu Yomas, Burma	Lieut. A. St. John Wright.
26	21	..	..	..	E. Bengal ..	Lieut. L. P. Haviland.
25 $\frac{1}{2}$	18 $\frac{1}{2}$	31	6 $\frac{1}{2}$	..	N. Kanara ..	Lieut. B. H. Selby.
25	13 $\frac{1}{2}$	24 $\frac{1}{2}$	..	5 $\frac{1}{2}$	Pegu Yomas, Burma	Lieut. E. V. Wills.
24 rt. }	16	32 $\frac{1}{2}$	60 $\frac{1}{2}$	23	Bhutan Duars ..	R. M. Woods.
21 $\frac{1}{2}$ left. }	15	32	58 $\frac{1}{2}$	23	Ditto ..	Ditto.
24	..	38 $\frac{1}{2}$	..	..	.....	Lieut. R. Chamier.
23	19	38	..	..	U. Burma ..	Lieut. P. Shephard.
20 $\frac{1}{2}$	13 $\frac{1}{2}$	29	55 $\frac{1}{2}$	24 $\frac{1}{2}$	Bhutan Duars ..	R. M. Woods.
20 $\frac{1}{2}$	12 $\frac{1}{2}$	28 $\frac{1}{2}$	53	24 $\frac{1}{2}$	Ditto ..	Ditto.
21 $\frac{1}{2}$ rt. }	20 $\frac{1}{2}$ rt. }	56	..	..	Assam ..	F. Bott.
20 $\frac{1}{2}$ left. }	20 $\frac{1}{2}$ left. }	..	..	..	Assam ..	F. Bott.
..	20	35	64 $\frac{1}{2}$	32 $\frac{1}{2}$	Ditto ..	Capt. Humphreys.
..	19 $\frac{1}{2}$	32 $\frac{1}{2}$	64 $\frac{1}{2}$	30	Ditto ..	Lieut. Molesworth.
..	18 $\frac{1}{2}$	35	69	23 $\frac{1}{2}$	Anamalai Hills ..	N. L. Sheldon.
..	17	33	68 $\frac{1}{2}$	29	Assam ..	Col. Molesworth.

THE GAYAL OR MITHUN.

Bos frontalis or *Gaurus frontalis*.—Indian names: *Gayal*, Hind.; *Mithun* *Buncra-goru*, Assam and Chittagong; *Sandung*, Manipur; *Bwisang*, Naga; *Nanouk*, Burma.

Habitat.—Assam and Cachar, Manipur, Tipperah, Chittagong, the Lushai Hills and Burma.

Period of gestation.—Probably ten months.

Description.—Very similar to the Gaur, but smaller, with shorter limbs, less developed dorsal ridge, a well-marked dewlap, forehead quite flat, horns almost straight, spreading outwards. The colouration is similar to that of the Gaur. Dark brown head and body, legs white or yellowish, horns blackish throughout. It is domesticated in Assam and elsewhere, and in the wild state breeds freely with tame cattle. The tame herds are never employed in agricultural labour or as beasts of burden; they seem to be reared more as signs of their owner's wealth than anything else. Their milk is drunk by a few, but by most of the natives it is regarded as excreta; they are not much used for food, though they are sacrificed on ceremonial occasions.

Measurements.—In height much less than the Gaur, but it is a heavy and clumsy looking animal compared with *B. gaurus*, and its horns average 11 inches.

Record head.—Mr. E. C. Stuart Baker, F.Z.S., who years ago contributed to the press much interesting and useful matter concerning the Gayal and the Gaur, has some very fine heads as recorded below. His $22\frac{3}{4}$ inches specimen is a record, the nearest approach to which is another in his possession— $18\frac{3}{4}$ inches. The British Museum specimen is 15 inches, and that in the Indian Museum $18\frac{1}{2}$ inches by $13\frac{3}{4}$ inches in girth, presented by Mr. R. W. G. Firth so far back as 1850.

Length.	Girth.	Tip to tip.	R o u n d sweep.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.		
..	$20\frac{1}{2}$	$11\frac{1}{2}$	72	Margherita, Assam..	W. Longridge.
..	$19\frac{1}{2}$	..	64	Hinguli (Chittagong) ..	Mr. A. S. A. Smith. (<i>This animal taped 8 feet 7 inches from base of hoof to top of hump.</i>)
$22\frac{3}{4}$ lft. 22 rt.	12	42	58	Assam	E. C. Stuart Baker, F.Z.S.
$18\frac{1}{2}$ lft. 18 rt.	..	29	$48\frac{3}{4}$	Ditto	Ditto.

THE BANTENG OR TSINE.

Bos sondaicus or *Bos banteng*.—Indian names : *Tswing* or *Hswing*, Burma ; *Sapi-utan*, Malay.

Habitat.—Throughout Burma and the Malay Peninsula, Sumatra, Siam, Borneo and Java.

Period of gestation.—Not known.

Description.—Very like the Gaur with dorsal ridge smaller and legs longer in proportion ; moderate dewlap ; the forehead not concave, the head more elongated. The colour in cows and young bulls is bright reddish brown but varies greatly ; old bulls are darker, *not* black as is generally asserted ; the darkest are rather chocolate with the usual stockings. Two very old bulls are reported by Mr. C. W. Bruce (who has shot over fifty) to have been "light grey with blackish faces." Both sexes have a whitish oval area on the buttocks extending to the root of the tail.

Measurements.—About 5 feet 4 inches in height at the shoulder ; length of body and head 8 feet 6 inches and the tail 3 feet ; it sometimes attains the height of seventeen hands in Java. Its habits are the same as those of the Gaur, though it is not such a good climber and seems to prefer the grass plains. It is often domesticated.

Record heads.—"Tsinegalat" in the *Field* gives some measurements of Banteng heads selected from some hundreds hung up in Chin villages, the best being—length, 31 inches; girth, 20 inches, tip to tip, 21 inches. The best head in the Indian Museum measures 31 inches by 21½ inches girth and was a contribution from the Batavian Society of Java. Anything over 25 inches is a very good head.

Length.	Girth.	Tip to tip.	Spread.	Height.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.	Ft. Ins.		
33	15½	29	37½	..	Mandalay ..	H. W. Tarleton. (<i>Asian.</i>)
32	17½	25	34	..	Gangaw, U. Burma ..	H. P. Evans.
30½	17	27½	34½	..	Mo Wong, Siam ..	G. F. W. Elwes.
30	16	28½	35	..	Burma ..	J. E. F. Jenkins.
29	17	28	37	..	Ditto ..	Ditto.
29	17	24½	33½	..	Gangaw, U. Burma ..	C. B. Mogggridge.
28½	15½	24	37½	..	Ruby Mines, Burma..	J. P. Cool.
28½	19	33½	37½	..	Burma ..	G. W. A. Bruce.
28	14½	27	33½	..	U. Burma ..	C. B. Mogggridge.
27½	15	28½	33½	..	Burma ..	G. W. A. Bruce.
27½	15	25	37	..	Gangaw, U. Burma ..	Capt. J. E. Colenso.
27½	15½	15	26½	..	Mo Wong, Siam ..	G. F. W. Elwes.
27	18	22½	31½	..	U. Burma ..	H. P. Evans.
27	16½	21½	29½	..	S. Siam ..	W. B. Elwes.

Length.	Girth.	Tip to tip.	Spread.	Height.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.	Ft. Ins.		
27	13½	24	31	..	Gangaw, U. Burma ..	H. P. Evans.
26¾ rt.	17 rt.	31½	38½	5½	Minglin, U. Chindwin	D. H. Allen.
26½ 1ft.	16½ 1ft. }	22	31	..	U. Burma ..	C. B. Moggridge.
26½	17	23½	36½	..	U. Chindwin, U. Burma	E. H. Beuchell.
20	16	27½	32½	..	U. Burma ..	H. P. Evans.
26	16¾	16½	26½	..	Gangaw, U. Burma ..	Ditto.
25¾	14	24½	30½	..	Burma ..	C. W. A. Bruce.
25	16	..	37	5 3	Tauwgyudgyi, Burma	Maj. C. M. Priestley.
25	14	27	30½	..	U. Burma ..	C. B. Moggridge.
24¾	14	28½	37½	..	U. Chindwin, U. Burma	E. H. Beuchell.
24¾	17	18½	25½	..	Mo Wong, Siern ..	A. A. Porter.
24¾	16	23	28½	..	Kubo Valley, U. Burma	Lieut. L. P. Haviland.
24½ rt.	15½ rt.	34	39½	..	Burma ..	G. M. Turner.
24½ 1ft.	15½ 1ft. }	21½	36	outside }	U. Burma ..	Lieut. C. Elliot.
24	10½	21½	28½	..	Ditto	C. B. Moggridge.
24	13½	16½	25½	..	Chindwin	Lieut. P. Shephard.
23¾	13	..	..	..	U. Burma ..	Lieut. C. Elliot.
23¾	13½	16½	25½	..	Ditto ..	C. B. Moggridge.
23¾	18	10	27½	..	Bhano ..	Lieut. R. J. Wood.
23¾	19½	22	33½	0 0	..	..

Length.	Girth.	Tip to tip.	Spread.	Height.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.	Ft. Ins.		
23 rt. } 25½ lft. }	15½	32½	36½	..	U. Burma ..	G. M. Turnor.
23	15	19	25	..	S. Siam ..	G. F. W. Elwes.
22½ rt. } 22 lft. }	17½	29½	40½	..	Gangaw, U. Burma..	J. G. F. Marshall. (Sweep from tip to tip across frontal bone, 55 inches.)
22½	14½	15½	24	..	U. Burma ..	C. B. Moggridge.
21	13½	17	28½	..	Ditto ..	Lieut. E. V. Wills.

THE YAK.

Bos grunniens.—Indian names: *Dong*, *Brong Dong* (wild), *Pegu* (tame), Tibetan; *Yak*, Ladak and N. Kumaon; *Banchour*, Hind.

Habitat.—Tibetan plateau at considerable elevations. Within Indian limits the wild yak is found only in Northern Ladak, especially about Chang Chenmo.

Period of gestation.—Ten months; the young are dropped in autumn.

Description.—High and massive at the shoulder, the yak slopes away above the hips. Its legs are short and thick ; hoofs large and rounded ; muzzle and ears small, no dewlap. Hair smooth on upper parts and sides growing to a long, thick, bushy fringe below ; a tuft of long hair on the breast ; an enormous tufted tail. A long head and flat forehead with smooth, round horns, slightly oval at the base and curving outward and upward. Colour dark brown throughout, with the exception of some white about the muzzle. Old bulls are reddish on the back. It frequents the coldest, wildest and most desolate mountains and ranges higher than any other animal. Bulls are usually solitary, but the cows and young collect in herds. The sense of smell is more acute than the powers of sight and hearing. They are timid, but sometimes charge when wounded.

Measurements.—Average height at shoulder, 5 feet 6 inches ; average head, 27 inches ; maximum single horn measurement, 40 inches.

Record heads.—The best head recorded is one shot by Mr. A. D. Carey in the Kuen Lun Mountains :—Left horn 40 inches, right 39 inches, and 18·9 inches at the base. Horns from 29 inches to 34 inches are often recorded. The best Indian Museum specimen, presented by Mr. W. Rutledge in 1894, carries horns of 33·4 inches by 11·8 inches in girth. Genl. Macintyre, in his *Hindu Koh*, mentions a head of 36 inches by 18 inches girth, and Col. A. E. Ward, in his *Sportsman's Guide to Kashmir and Ladak*, mentions horns of 31½ and 30 inches.

Col. Kinloch, in *Large Game Shooting*, gives "about 36 inches by 14 inches" as the best he had seen.

Length.	Girth.	Place.	REMARKS.
Inches.	Inches.		
40 ft.	18	Kuen Lun Mt.	A. D. Carey.
39 ft.	16 $\frac{1}{2}$	N. W. Tibet	Capt. S. H. Harrington.
33	16 $\frac{1}{2}$	N. W. Tibet	P. F. Hadow.
32 $\frac{1}{2}$	..	Ditto	Capt. J. A. S. Bulmain.
32	13 $\frac{1}{2}$	Changchenmo	"K. O. B." (<i>Asian</i> .)
30 $\frac{1}{2}$	15 $\frac{1}{2}$	Tibet	Lieut. F. F. Gillies.
29 $\frac{1}{2}$			

THE BUFFALO.

Bos bubalus or *B. arni*.—Indian names : *Arni* or *jungli bhains* or *Arni bhainsa*, Hind. ; *Bhains*, Beng. ; *Gera erumi*, Gond. ; *Moh*, Assam ; *Misip*, Cachar ; *Kywai*, Burma.

Habitat.—The Brahmaputra and Ganges Churs, Assam, Cooch Behar, Orissa, the Central Provinces, etc.

Period of gestation.—Ten months ; one or two calves are dropped in summer.

Description.—Almost exactly like the tame buffalo, but the horns are much bigger. The colour is almost black, legs sometimes whitish, cows' horns are longer than bulls, but of less girth. Generally found about swamps, haunting the densest grass, jungle or reeds. It loves to wallow, associates in herds, feeds chiefly on grass, morning and evening, and lies up during the day in grass or marsh. Not shy, is very bold and savage, frequently attacking without provocation.

Measurements.—The average height at shoulder is 6 feet; average horn measurement, 50 inches. Maximum horn measurement, 78½ inches.

Record heads.—There is in the British Museum a single horn which measures 78½ inches. It came from Africa and was figured in the Philosophical Transactions of the Royal Society in 1727. This was proved to belong to a large Indian buffalo, and allowing a foot for the forehead, the complete head probably measured from tip to tip over 14 feet. This is bigger than Col. Pollock's specimen which measured 13 feet 8 inches and was presented by that sportsman to the Lord Mayor of London. "F. D." (*Asian*, 1st July, 1884) records 13 feet 4 inches along the outside curve (male), and "N. S. K." in the same journal (3rd August, 1880) gives 12 feet 9 inches and 34 inches girth as the dimensions of a fine Assam male. Mr. A. Forbes, C.S., shot one in Assam that taped 12 feet 1 inch measured by Mr. W. L. Slater, F.Z.S. Undoubtedly, the best heads come from Assam. In the British Museum there are several heads carrying horns that range from 53 inches to 58 inches (single).

Tip to tip and across forehead.		Birth.	Spread.
Ft.	Ins.	Inches.	Inches.
11	8 $\frac{1}{2}$	17 $\frac{1}{2}$	..
11	2	20	..
10	11 $\frac{1}{2}$	20	57 $\frac{1}{2}$
10	8 $\frac{1}{2}$	17 $\frac{1}{2}$	..
10	5	19	56
10	4 $\frac{1}{2}$	20 $\frac{1}{2}$	66
10	3	..	..
10	2 $\frac{1}{2}$	22 $\frac{7}{8}$	..
9	4 $\frac{3}{4}$	19 $\frac{1}{4}$	52
8	11	17 $\frac{3}{4}$	49
8	10 $\frac{1}{2}$	20 $\frac{7}{8}$	..
8	10	19 $\frac{5}{8}$	48
8	4	19 $\frac{1}{4}$	47
8	1	17	49 $\frac{1}{2}$
7	10	16 $\frac{1}{2}$	48
..

Tip to tip.	Max. span.	Place.	REMARKS.
Inches.	Ft. Ins.		
..	..	Assam	R. E. Scott Erskine.
..	..	Ditto	E. G. Stuart Baker, F.Z.S.
57½	..	Ditto	Maj. A. F. Mackenzie. ("B. N. H. S. <i>Journal</i> ," Vol. XVII.)
..	..	Ditto	R. E. Scott Erskine.
46	Bombay N. H. Socy.'s Museum.
51	A. B. Arluthnot. (<i>Asian</i> .)
..	..	Assam	Lieut. L. P. Haviland. (<i>Right horn</i> , 62 inches; <i>left horn broken</i> , 42 inches.)
..	..	Ditto	E. G. Stuart Baker, F.Z.S.
34	..	G. India	M. E. Anderson. (<i>Horn</i> , 51 inches.)
30	..	Ditto	Ditto (<i>Horn</i> , 47½ inches.)
48¾	..	Khariar, G. P.	R. D. T. Alexander.
34¾	..	Assam	R. M. Woods.
34½	..	Ditto	Ditto.
37¾	..	Ditto	Ditto.
37¾	..	Ditto	Ditto.
96	8 1	....	H. H. Cooch Behar "R. L." ("The <i>Field</i> "— <i>left horn</i> , 4 feet 10 inches.)

THE GREAT TIBETAN SHEEP OR NYAN.

Ovis hodgsoni.—Indian names: *Nyan* (male), *Nyan mo* (female), Ladak; *Nyang*, *Hyan*, Tibetan. Erroneously called the “Ammon” by sportsmen.

Habitat.—Tibet, Ladak, and Sikkim. It is not found south of the main Himalayan axis. In winter it may descend to 12,000 feet, in summer it seldom ranges below 15,000 feet.

Period of gestation.—Doubtful, probably about seven months; the young are born about May or June.

Description.—Coarse, short, and very close hair; ears and tail short; a white ruff in adult males; a dark crest of hair along the back and withers. Horns of the male very massive, coarsely wrinkled, triangular in section, with rounded edges; the curve is spiral with the tips turned slightly upwards, and the curve of each horn rather less than a complete circle. Female horns short, erect, thin towards the end, curved backwards and outwards. The colour is greyish brown above, paler and whitish below. In males the rump, throat, chest, belly and insides of the legs are white, and old males are grizzled on the back. Females are maneless, the caudal disc is indistinct, and the white is less pure. The coat is paler in winter than in summer.

The Nyan is the largest known sheep and the most wary of all animals. Every sense is abnormally acute, it is very speedy and, haunting open ground, is exceedingly difficult to stalk and shoot.

Measurements.—Average height, 48 inches at shoulder; length from nose to rump, 6 feet. Adult male horns 41 inches round the curve; basal girth, 16 to 17 inches; female horns rarely exceed 18 inches.

Record heads.—Anything over 42 inches is a good head. Heads from 50 inches to 57 inches have been recorded; but are evidently never seen nowadays. There used to be a head in the British Museum which measured 50 inches by 20 inches; Baldwin records 43 inches by 22 inches as his best; and Gen. A. A. Kinloch declares his largest to be 40 inches by 17 inches. Writing to the *Asian* (1st December, 1885) "Thar" testifies to a head $40\frac{1}{2}$ inches by $17\frac{1}{2}$ inches and "H. M. B." (30th October, 1891) to one of 46 inches.

Length.	Girth.	Tip to tip.	Place.			REMARKS.
Inches.	Inches.	Inches.				
48	18	..	Tibet	..	..	Mess, 45th Rattray's Sikhs.
$47\frac{1}{2}$						
$47\frac{7}{8}$						
	18	..	Ladak	..	..	Maj. Brook-Smith,

Length.	Girth.	Tip to tip.	Place.			REMARKS.
Inches.	Inches.	Inches.				
47 $\frac{1}{4}$	17 $\frac{1}{4}$	..	Ladak	..	..	Capt. S. B. Paterson.
45	17 $\frac{1}{2}$	..	Ditto	..	..	P. F. Hadow.
44	18	..	Tibet	..	..	Capt. O. B. Walker.
43 $\frac{1}{2}$	16 $\frac{1}{2}$	18	Kashmir	..	..	Capt. J. Murray.
43 $\frac{1}{2}$	16	20	....			Indian Museum.
43	17	17	Cholomo, N. Sikkim	..	..	Capt. A. L. M. Molesworth.
42 $\frac{1}{2}$	17 $\frac{1}{2}$	..	Ladak	..	..	Capt. F. E. S. Adair.
41	17 $\frac{1}{4}$	17	Ditto	..	..	Officers' Mess, 37th Dogras.
40 $\frac{1}{2}$	18	..	Ditto	..	..	Capt. G. H. Davis.
37 $\frac{1}{2}$	18	..	Ditto	..	..	Capt. F. E. S. Adair.

THE GREAT PAMIR SHEEP.

Ovis poli.—Indian names : *Kuchkar* (male), *Mesh* (female), Wakhan.

Habitat.—This sheep is found in Indian limits only in Hunza, north of Gilgit and the Tagdumbash.

Period of gestation.—Unknown.

Description.—Closely allied to the Nyan, the difference being chiefly in the horns and colour. Its enormous horns are less in girth than in the Nyan, but much longer, each forming a spiral of considerably more than a circle. The female horns are wretchedly small. Its habits and breeding season are the same as those of the Nyan.

Measurements.—Adult males 44 inches at shoulder, length from horns to tip of tail, 5 feet 2 inches; tail about 4 inches; horns 48 inches; good horns measure from 50 to 60 round the curve and about 15 inches in basal girth.

Record heads.—Very few Indian sportsmen have shot this sheep; many of the heads recorded were picked up on the Pamir I believe. "Smoothbore," the late Mr. H. R. P. Carter, writing in an Indian journal on the 13th November, 1891, gave Lord Roberts' specimen as the record—Length, 75 inches; girth, 16 inches; tip to tip, 51½ inches. Sterndale mentions a head of 73 inches by 17 inches and tip to tip 48 inches, and a fine head got in Hunza by Col. J. Biddulph and presented to the Indian Museum measured as follows—Left horn, 68 inches; right horn, 67 inches; girth of both, 16 inches; tip to tip, 52½ inches. A Mr. Duvergne, of Kashmir, had a head of over 70 inches. The best head obtained by members of the Yarkand Expedition of 1874 was 65 inches by 16 inches, tip to tip, 53 inches. In the *Journal of the Bombay Natural History Society*, Viscount E. de Pourcins tells of a 71-inch head, got on the Great Pamir. Very few horns of over 60 inches are recorded now.

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.		
71	15½	53¾	Great Pamir ..	Viscount E. de Ponsins. (<i>B. N. H. S. Journal.</i>)
63	..	..	....	Col. G. Sullivan.
58¾	18¼	44¾	Hunza ..	Officers' Mess, 3rd Gurkhas.
55½	17	..	Tagdumbash ..	P. F. Hadow.
55	..	..	Ditto ..	Ditto.

. THE OORIAL, SHA, OR SHAPO.

Ovis vignei or *Ovis cycloceros*.—Indian names : *Gach* (male), *Mish* (female), P. ; *Shapo* (male), *Shamo* (female), Ladak ; *Dumbh-i-koh*, Afghan ; *Urin*, Astor ; *Rock*, Baluch and Sind ; *Oorial*, Punjab.

Habitat.—Very wide. It is found in Ladak, in Northern Tibet, Astor and Gilgit, Afghanistan, the Punjab Salt Range, along both banks of the Indus, from Attock downwards as far as Makhad, and in Sind down to sea-level.

Period of gestation.—Seven months. The young are produced in early summer, one or two being born. The Shapo breeds freely with tame sheep.

Description.—Coarse, close, short hair; short tail. Adult rams have a ruff of long hair from behind the chin down to the chest. The horns, triangular in section, are coarsely wrinkled, arise close together, diverge considerably and are curved nearly in a circle. Female horns are nearly straight. In summer this sheep is fawn above, in winter light greyish brown; lower parts, limbs, buttock and tail whitish; ruff black with an admixture of white hairs. In old animals the muzzle is white. It inhabits open valleys and grassy undulating ground cut up by ravines. The herds vary from three or four to twenty or thirty; they are wary and active and are good climbers; they bleat, but their alarm cry is a shrill whistle.

Measurements.—Average height at shoulder, 31 inches. Average horn measurement, 30 inches, but the more massive specimens seldom exceed 26 inches.

Record heads.—The biggest heads mentioned by any sporting writers are 39½ inches and 39 inches. Capt. Cotton, R. A., gives 38½ inches as the measurement of a splendid specimen bagged not far from Attock. Heads ranging from 34 to 36 inches have often been recorded. The Indian Museum specimen, from Kashmir, presented by Mr. H. Duvergne, is 31 inches by 11½ inches girth. In the *Sportsman's Guide*, Col. A. E. Ward mentions one which measured 36½ inches by 11½ inches in circumference.

Length.	Girth.	Tip to tip.	Place.		REMARKS.
Inches.	Inches.	Inches.			
39½	12	..	....		Officers' Mess, 53rd Sikhs.
39½	10¾	18½	Punjab	..	Ditto.
36½	11½	13	Leh	..	Capt. S. B. Paterson.
25 rt. }	..	..	Attock	..	H. B. Simons.
35½ lft. }	..	..	Attock	..	H. B. Simons.
35 rt. }	8¾	16	....		O. H. L. Napier.
33 lft. }	..	..	....		O. H. L. Napier.
34	12	..	Ladak	..	Officers' Mess, 37th Dogras.
33½	11½	..	Ditto	..	P. F. Hadow.
33	11¼	..	Chitral	..	G. Rose
31 rt. }	..	..	Attock	..	H. B. Simons.
30½ lft. }	..	..	Attock	..	H. B. Simons.
30½	..	..	Baluchistan	..	Lieut. A. S. Fitzgerald.
30	9	..	Sind	..	Capt. G. H. Davis.
29½	9½	..	Punjab	..	Lieut. B. H. Selby.
29	..	..	Kashmir	..	Maj. P. Lea Birch, R. A.
28	10	15	Ladak	..	Lieut. F. F. Gillies.
27½	..	..	Paltasun, Kila Doshi,	..	Lieut. A. B. Rombulow Pearce.
			Chitral.	..	(Picked up.)
27½	10½	15½	Baltistan	..	Capt. S. H. Harrington.
26½	10½	..	Punjab	..	Lieut. B. H. Selby.

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.		
26½	18	10	Ladak	Lieut. F. F. Gillies.
26	10¾	18	Astor	Capt. G. P. Evans.
24½	..	..	Paitasun, Kila Drosh, Chitral.	Lieut. A. B. Rombulow Pearse. (Picked up.)

THE BURRHTEL OR BLUE WILD SHEEP.

Oris nakura or *Oris burrel*, *Pseudovis nahoor*.—Indian names : *Burrhel* (rams, *Menda*). Hind. ; *Na*, *Sna*, or *Napu*, Ladak ; *Wa*, Sutlej Valley ; *Nervati*, Nepal ; *Nao*, Bhutan.

Habitat.—From Baltistan eastwards ; seldom seen below 10,000 feet, in summer from 14,000 feet upwards.

Period of gestation.—160 days. It never breeds with tame sheep. It is easily tamed and breeds freely in captivity.

Description.—This animal is as much a goat as a sheep, though it favours the latter genus in external appearance. Hair uniform throughout, no mane or ruff.

Short ears and tail. Horns rounded at base and fairly smooth to the tips. In females, the short horns are slightly curved upwards and outwards. In colour, brownish grey above; lower parts, belly, inside legs, buttocks and base of tail, white. In males, the face, chest, and sides have black markings, which are wanting in females. It prefers undulating ground, is a splendid climber, and very speedy. It lies down during the day on its feeding ground and never enters bush or scrub. Its colour renders it practically indistinguishable when lying among stones. The flesh is excellent, especially in September.

Measurements.—Full grown males average height at shoulder, 35 inches; average horn measurement, 22 inches; basal girth, 11 inches; female horns are considerably smaller in all dimensions.

Record heads.—In bygone days heads of over 30 inches were occasionally met with, but in the present year of grace a 26-inch head is something to be proud of. Ancient records tell of specimens of 32 inches which is the length of the best specimen in the Indian Museum, with a girth of $12\frac{1}{2}$ inches and a tip to tip measurement of $25\frac{1}{4}$ inches. In 1884, another "K. O. B." sent to an Indian paper details of a head that measured $30\frac{1}{2}$ inches and $27\frac{1}{2}$ inches left and right horns respectively, and Col. Ward mentions one that was picked up in Ladak and measured 27 inches. Mr. F. R. Neave, c.s., and Mr. A. P. Davis, of Garhwal, have secured heads of 25 inches and upwards. There is another very fine head in the Indian Museum which measures $28\frac{1}{2}$ inches by $10\frac{1}{2}$ inches.

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.		
27 $\frac{1}{2}$	11 $\frac{1}{2}$	17 $\frac{1}{2}$	Donkyaia ..	.. Capt. A. L. M. Molesworth.
27 $\frac{1}{2}$	11	..	Ladak ..	.. Lieut. O. J. Fooks.
27 $\frac{1}{2}$	11	..	Ditto ..	.. Capt. G. H. Davis.
27 $\frac{1}{2}$	11	..	Ditto ..	.. Ditto.
27	11 $\frac{1}{2}$	..	Ditto ..	.. Capt. O. B. Walker.
27	12	..	Ditto ..	.. E. R. Neave, c.s.
26 $\frac{1}{2}$	11	21	Kumaon ..	.. Lieut. F. F. Gillies.
26 $\frac{1}{2}$	11 $\frac{1}{2}$	22 $\frac{1}{2}$	Ladak ..	.. Capt. G. H. Davis.
26 $\frac{1}{2}$	11 $\frac{1}{2}$	..	Ditto ..	.. Capt. J. Murray.
26 $\frac{1}{2}$	11 $\frac{1}{2}$	..	Rupshoo ..	.. Lieut. B. H. Selby.
26 $\frac{1}{2}$	11	25 $\frac{1}{2}$	Changchenmo ..	.. Lieut. O. J. Fooks.
26 $\frac{1}{2}$	12	27 $\frac{1}{2}$	Ladak ..	.. P. F. Hadow.
26	12	..	Ditto ..	.. Capt. J. A. S. Balmain.
26	11	..	Ditto ..	.. E. R. Neave, c.s.
26	9 $\frac{1}{2}$	..	Kumaon ..	.. Lieut. B. H. Selby.
25 $\frac{3}{4}$	11	22	Hanle ..	.. Capt. J. Murray.
25	13 $\frac{1}{2}$	28	Rupshoo ..	.. Capt. G. K. Channer.
25	12 $\frac{1}{2}$	20 $\frac{1}{2}$	Kumaon ..	.. A. P. Davis.
25	12 $\frac{1}{2}$	21 $\frac{1}{2}$	Garhwal ..	.. Ditto.
25	11	..	Ditto ..	.. Lieut. F. F. Gillies.
24 $\frac{1}{2}$	11 $\frac{1}{2}$	19 $\frac{1}{2}$	Ladak ..	.. Lieut. B. H. Selby.
24 $\frac{1}{2}$	11 $\frac{1}{2}$	..	Changchenmo ..	..
24 $\frac{1}{2}$	12	32		

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.		
24 $\frac{1}{4}$	11 $\frac{1}{2}$	..	Garhwal ..	A. P. Davis.
24 $\frac{1}{4}$	11 $\frac{1}{2}$	..	Ladak ..	Officers' Mess, 37th Dogras.
24	12 $\frac{1}{2}$	24	Ditto ..	Lieut. F. F. Gillies.
23 $\frac{5}{8}$	12 $\frac{1}{4}$	24	Changchenmo	Lieut. B. H. Selby.
23 $\frac{1}{2}$	12	..	Garhwal ..	A. P. Davis.
23	11	26	Ladak ..	Capt. S. H. Charrington.
22 $\frac{1}{2}$	11 $\frac{1}{4}$	23	Kumaon ..	Capt. M. E. Dopping Hepenstal.
22	11 $\frac{3}{4}$	..	Garhwal ..	A. P. Davis.
21 $\frac{1}{2}$	11 $\frac{1}{4}$	32	Niti Valley ..	Capt. S. H. Charrington.
19 $\frac{1}{2}$	11 $\frac{1}{2}$	27 $\frac{1}{2}$	....	Capt. K. L. W. Mackenzie.
18 $\frac{3}{4}$	12 $\frac{1}{2}$	26	....	Ditto.

THE PERSIAN WILD GOAT.

Capra agagrus.—Indian names: *Ter*, *Sarah*, Sind. The "Sind Ibex" of European sportsmen.

Habitat.—This goat is found in Baluchistan and Sind, but not east or north-east of Quetta. It occurs near sea-level, but ascends to 13,000 feet further north. It is probably the principal progenitor of our tame goats.

Description.—In colour, brownish grey in winter and lightish grey in summer. Lower and inner parts and buttocks whitish. Old males are paler throughout. The male is bearded on the chin only. The horns of the male are scimitar-shaped, curved backwards, greatly compressed, irregularly notched and jagged, posterior edge rounded. Female horns much smaller, erect, curved slightly backwards, oval in section and ribbed.

It inhabits barren rocky hills in herds, is very active and wonderfully sure-footed. The Bezoar, formerly famous in Europe and Persia as an antidote to poison and a cure for many diseases, is a concretion found in the stomach of this goat.

Measurements.—Full grown males 37 inches high at the shoulder, from muzzle to tail, 5 feet 4 inches. Good horns measure 40 inches round curve with a basal girth of 7 inches; average horns 36 inches. The females are less in body and horn measurements.

Record heads.—In Sterndale's *Mammalia*, mention is made on the authority of Mr. J. D. Inverarity, the sporting Bombay barrister, of a 52½-inch head, while several ranging from 42 to 48 inches, including the British Museum specimens, have found the light of publicity. Capt. G. H. Davis, S. and T. Corps, shot a fine animal carrying 48½ inches horns, and he also secured another one with 42 inches horns, the former being the best head obtained during recent

years. Lieut.-Col. L. L. Fenton bagged a male specimen at Kajnag which taped 41 inches. In the Indian Museum the best head is one of 43·3 inches shot by Col. Sir O. St. John, near Shiraz.

THE HIMALAYAN IBEX.

Capra sibirica or *Capra himalayana*.—Indian names : *Skin* (male), *Danmo* (female), Ladak and Baluchistan ; *Kail*, Kashmir ; *Tangrol*, Kulu ; *Buz*, Kanawar ; *Skin*, Balti.

Habitat.—Herat, Kashmir, but not in the Pir Panjal, in the higher Himalayas, Kumaon as far east as Gangotri.

Period of gestation.—Unknown, the female has one or two young.

Description.—Heavy build and short legs. The male has a profuse chin beard and a ridge of coarse dark hair along the back. The hair is coarse and brittle with an under-fur in winter. The scimitar-shaped horns diverge and curve backwards, they are nearly triangular in section with the posterior edge compressed, the anterior surface having large knots at regular intervals. Female horns much smaller. The

colour is brown, old males being chocolate with a white saddle. In winter the colour is lighter. The legs are dark and the beard and tail dark-brown.

It is usually found on broken ground and is not difficult to stalk ; it is excessively wary, but nearly always expects danger from below. Its danger signal is a shrill whistle through the nostrils.

Measurements.—Average height at shoulder of adult male about 40 inches ; females a third smaller. Good horns measure 40 to 45 inches ; female horns about a foot.

Record heads.—A magnificent trophy was shot by Mr. P. F. Hadow in the Ile District of the Thian Shan, but he had the great misfortune to lose it in a river soon after. The tips of the horns had been broken in the fall, but in spite of this the horns taped—left, $59\frac{1}{2}$ inches ; right, $58\frac{1}{4}$ inches ; tip to tip, $52\frac{1}{2}$ inches ; circumference, $13\frac{1}{2}$ inches—easily the record. The broken tips he estimated at $1\frac{1}{2}$ inches and $2\frac{1}{2}$ inches respectively. Another splendid specimen was shot by Mr. P. F. Hadow about the same time, with a horn measuring $56\frac{3}{4}$ inches ; $10\frac{1}{4}$ inches girth ; and $23\frac{3}{4}$ inches tip to tip. A fine trophy described by Blyth (*Proc. Zool. Soc.*, 1840, p. 80), measured 54 inches by $10\frac{1}{2}$ inches. Col. A. E. Ward tells of large pairs 50 by 10 and 49 by 11 inches in his *Sportsman's Guide* and there is an old pair in the Indian Museum of $46\frac{1}{2}$ inches, measured by Mr. W. L. Selater. Col. A. Crookshank shot one at Hundipore, Kashmir, which taped just 46 inches.

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.		
55	10	34½	Gilgit ..	Maj. B. E. M. Gurdon.
55	..	..	Tagdimbush ..	Col. A. E. Ward.
53½	10¾	34	Ilo Dist., Thian Shan ..	P. F. Hadow.
53	11½	48½	Ditto ..	Ditto.
52¾	10	34	Gilgit ..	Maj. B. E. M. Gurdon.
52¾	11½	29½	Ilo Dist., Thian Shan ..	P. F. Hadow.
51¾	11½	36¾	Ditto ..	Ditto.
51¾	10¾	29½	Ditto ..	Ditto.
51½ lf.) 49½ rt.)	10½	31½	Chitral ..	O. Gilbert Davies.
51	..	..	Shind Nulla, Kashmir ..	Col. A. E. Ward.
50¾	11½	36	Ilo Dist., Thian Shan ..	P. F. Hadow.
49¾	10	29½	Gilgit ..	V. Wainwright.
49	9¾	36	Balistan ..	Capt. J. T. G. Murray.
49	10	19½	Ditto ..	Ditto.
48½	..	..	Chitral ..	M. Ostryhan, 1-9th Gurkha Rifles.
46½	11¾	19½	Near Kashgar ..	Indian Museum.
46½	10¾	..	Leh ..	Capt. S. B. Paterson.
46½	10¾	..	Ladak ..	P. F. Hadow.
46	..	..	Kashmir ..	Maj. L. E. Kennard.

The colour in summer is a rich reddish brown, grey in winter, long hair, beard black in front, whitish behind.

The Markhor is the grandest of all wild goats, extremely agile and a magnificent climber. It usually occurs in herds and frequents stony ravines and steep hill-sides.

Measurements.—About 38 inches at the shoulder, and 55 from the horns to the root of the tail. The horns vary in length in different varieties. Good horns of the *Astor* and *Pir Panyal* variety run from 45 to 50 inches round the curve and 36 inches straight from base to tip; of the *Cabul* variety 44 to 48 round front curve; in the *Suleiman* variety 49 round the curve and 36 inches straight from base to tip.

Record heads.—The Badminton Library (*Big Game Shooting*) gives 63 inches as the record for the *Pir Panyal* variety and Col. Ward in his *Sportsman's Guide* gives 63, 61, 59, 56, etc. In the Lucknow Museum there are 60 and 59 inches heads, and in the details we give further on there is a 60½-inch head (*Pir Panyal* variety) shot by Capt. H. Burstow, and one an inch smaller (*Pir Panyal* variety) shot by Major Roos Keppel. "Constant Reader" (*Asiatic*, 14th September, 1880) mentions a 60-inch head brought by Hutton from *Cabul*; Capt. Barnes, of the 10th Bengal Lancers, shot a *Pir Panyal* Markhor with 59½ inches horns. Lord Lansdowne has a 58½-inch head got in Gilgit. Many heads of over 45 inches have been recorded by Himalayan sportsmen, the largest shot by Gen. Kinloch

was $47\frac{1}{2}$ inches. All these measurements refer to the *Astor* or *Pir Panjal* variety. In the *Cabul* or *Suleiman* variety the record is $48\frac{1}{2}$ inches, an odd horn in the collection of the British Museum. Then there is Major Fitz Herbert's 48 inches specimen recorded in the Badninton *Big Game Shooting*. An average good head for each variety is 40 inches.

Length.	Girth.	Tip to tip.	Spread.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.		
$60\frac{3}{4}$ lft. } 59 $\frac{1}{2}$ rt. }	$11\frac{1}{4}$	46	..	Gilgit ..	Capt. H. Barstow (<i>Pir Panjal</i> var.).
$59\frac{3}{4}$	12	$30\frac{1}{2}$	..	Porachinar ..	Maj. Roos Keppel (<i>Pir Panjal</i> var.).
$58\frac{1}{4}$	$10\frac{1}{2}$	42	..	Kajrag ..	Maj. A. R. Knox.
56	$11\frac{1}{2}$	32	..	Chitral ..	C. Rose (<i>Pir Panjal</i> var.).
55	11	$38\frac{1}{10}$	$41\frac{1}{4}$	Gilgit ..	Officers' Mess, 3rd Gurkhas (<i>Pir Panjal</i> var.).
53	..	..	..	Ditto ..	Maj. B. E. M. Gurdon.
$52\frac{7}{8}$	..	..	..	Chitral ..	Capt. Inglis.
$52\frac{3}{4}$	..	..	36	Ditto ..	Maj. B. E. M. Gurdon.
52	11	$48\frac{1}{2}$	..	Chilas, Gilgit ..	P. F. Hadow.
51	$10\frac{1}{2}$	41	..	Kajrag ..	Lieut. F. W. A. Wells.
50	12	..	..	Ditto ..	Capt. G. H. Davis.

Length.	Girth.	Tip to tip.	Spread.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.		
50	12½	44	..	Gilgit ..	Officers' Mess, 37th Dogras (<i>Astor</i> var.).
45	10½	37½	..	Ditto ..	Indian Museum.
33½	10	23½	..	....	Officers' Mess, 37th Dogras (<i>Suleiman</i> var.).
29	11	24	..	Baluchistan ..	Lieut. L. P. Haviland (<i>Suleiman</i> var.).

THE TAHR OR TEHR.

Hemitragus jemlaicus or *Capra jharal*.—Indian names: *Tehr*, *Jehr*, Western Himalayas; *Kras*, *Jaglu*, Kashmir; *Kart*, Kulu and Chamba; *Jharal*, Nepal; *Jhula* (male), *Tharni* (female), Kunawar; *Esba* (male), *Esbi* (female), Sutlej above Chivi.

Habitat.—Throughout the Himalayas from Kashmir to Sikkim.

Period of gestation.—Six months; kids being born in June or July.

Description.—A long, narrow and straight head ; horns slightly wrinkled, much flattened on each side, almost touching at the base and diverging backwards in a sharp curve. Hair short on the head, much longer on the body, old males having a shaggy mane reaching to the knees which, with the breast, are callous. Four teats. It is a rich dark brown in colour on top, shading to paler at the base ; males are much darker than females, but there is great variety in colour. The face and front of all the limbs very dark, old males having a dark band down the back. It is a forest-loving animal, and prefers steep tree-covered slopes. Females occasionally affect the open, old males seem to prefer the thickest jungle. The Tahr finds a footing in the most impossible looking places.

Measurements.—Males weigh up to 200 lb., stand from 3 feet to 3 feet 4 inches at shoulder, with a total length of 4 feet 6 inches ; the horns are small, ranging from 12 to nearly 15 inches round the curve, with a basal girth of 9 inches and a span of about 10 inches. Female horns seldom exceed 9 inches.

Record heads.—The best head on record was in the possession of Wilson, the well known Himalayan shikari “ Mountaineer ” ; we have it on the authority of Mr. Hume, that it measured $16\frac{1}{2}$ inches, and was $11\frac{1}{2}$ inches in girth. Heads of 14 inches upwards are nowadays tolerably scarce, details of several I give further on. The British Museum specimen is $13\frac{3}{4}$ inches by 9 inches ; and that in the Indian Museum presented by Mr. Hodson, the naturalist, is 13 inches by 9 inches.

Length.	Girth.	Tip to tip.	Place.		REMARKS.
	Inches.	Inches.			
Inches. 15½	8½	9	Garhwal	..	Mr. V. A. Mackinnon. (<i>Bought at the sale of the late Mr. Wilson, "Mountaineer"?</i>)
14½	8½	5	Chamba	..	Capt. J. T. C. Murray.
14½	9½	7½	Garhwal	..	Officers' Mess, 3rd Gurkhas.
14½	8½	..	Chamba	..	Capt. Phillips.
14½ ft.	8½	6	{ Wadwan Valley } Daoban, Kishwar	..	Lieut. H. W. Andrewes.
14½ ft.	8½	..	Pade Dist., Kashmir	..	J. M. Cameron.
14½	9	6	Tehri Garhwal	..	Capt. S. H. Charrington.
14½	..	..	Garhwal	..	A. P. Davis.
14½	8½	..	Ditto	..	Capt. Phillips.
14	9	..	Kishwar	..	Capt. G. H. Davis.
14	8½	..	Pader, Kishwar	..	P. F. Hadow.
14	8½	..	Tehri Garhwal	..	Lieut. G. J. Ratcliff.
14	..	..	Garhwal	..	A. P. Davis.
14	..	..	Chamba	..	Lieut. O'Neill.
13¾	..	..	Ditto	..	Ditto.
13¾	..	..	Tehri Garhwal	..	Lieut. G. J. Ratcliff.
13¾	..	..	Garhwal	..	A. P. Davis.
13½	..	..	Ditto	..	Ditto.

Length.	Girth.	Tip to tip.	Place.			REMARKS.
Inches.	Inches.	Inches.				
13	..	..	Garhwal	..	..	A. P. Davis.
13	..	..	Kishtwar	..	..	Col. A. E. Ward.
13	7	8 $\frac{3}{4}$	Chamba	..	..	Lieut. O. J. Fooks.
13	..	4 $\frac{7}{8}$	Kishtwar	..	..	Lieut. F. F. Gillies.
12 $\frac{1}{2}$	..	7 $\frac{1}{2}$	Ditto	..	..	Ditto.
12 $\frac{1}{2}$	..	..	Chamba	..	..	Capt. M. B. P. Reeve, 58th F. R. F.
12	..	..	Garhwal	..	..	A. E. C. Casey, I.C.S.
11 $\frac{1}{2}$	8 $\frac{3}{4}$	5	Ditto	..	..	Lieut.-Col. C. E. Nichol.
11 $\frac{1}{4}$	8 $\frac{1}{4}$	6 $\frac{1}{2}$	Ditto	..	..	Ditto.

THE NILGIRI WILD GOAT.

Hemitragus hylocrius or *Capra hylocrius*.—Indian names : *Warri'atu*, Tamil ; *Kard-ardu*, Can. ; *Mulla-atu*, Malabar. The " Ibex " of sportsmen.

Habitat.—The Nilgiris and Southern India hills and Western Ghats from the Anamalais to Cape Comorin and chiefly found at elevations between 4,000 and 6,000 feet.

Period of gestation.—Uncertain ; but breeding appears to go on almost throughout the year ; two at a birth.

Description.—Short, thick, coarse, yellowish brown hair, the lower parts paler. Old males are almost black on the face and limbs with a short stiff mane on the ridge of the neck and withers. Knees callous. The horns almost touch at the base; are sub-parallel for some distance, then curve sharply backwards and outwards; two teats. In very old males the lumbar tract is almost white—the saddle black.

In habits and haunts it resembles the Tahr, though it dwells in a more tropical climate. It keeps above the forest and rarely enters woods, preferring grassy slopes and precipitous crags, feeding morning and evening and resting during the day. They are found in herds of from 5 to 50, are very nimble, quick sighted and wary, an old female usually acting as sentinel: the males have a pronounced caprine odour and their flesh is rank, but that of the does and young males is excellent.

Measurements.—Old males from 39 to 42 inches at shoulder; 50 inches from nose to tail; tail, 3 inches; male horns from 12 to 16 inches round the curve; female horns, 8 or 9 inches.

Record heads.—The best head of which there is any authentic record was got in the Nilgiris some years ago and measured $17\frac{1}{2}$ inches. In his notes on Jerdon's *Mammals*, McMaster gives 17 inches by $9\frac{3}{4}$ inches and $15\frac{3}{4}$ inches by 9 inches, as the two best heads he had seen; these were shot near Ootacamund by "M. C. S." in the early sixties. Mr. H. D. Deane got a fine specimen with

horns measuring $16\frac{1}{4}$ inches, girth $8\frac{1}{2}$ inches, tip to tip $6\frac{1}{2}$ inches on the Varjaman Hill, Peermaade Districts, and some years later he shot another in the same place with a horn of $15\frac{1}{2}$ inches, girth 8 inches, and tip to tip 6 inches. Mr. R. E. Hurlam obtained a specimen with a right horn measuring $15\frac{3}{4}$ inches and left horn 15 inches, girth 8 inches and tip to tip 6 inches in the Peermaade Hills, Travancore. Capt. S. H. Charrington shot one in South Madras which measured 15 inches, girth 8 inches, tip to tip 6 inches. Mr. N. L. Sheldon bagged a good head measuring $14\frac{3}{4}$ inches by $8\frac{5}{8}$ inches in girth, in 1906. Capt. H. R. Milvain records a specimen of $14\frac{1}{4}$ inches, and Capt. S. H. Charrington one of 14 inches, $7\frac{1}{2}$ inches girth, $4\frac{1}{2}$ inches tip to tip. The Indian Museum specimen, presented by the Rev. H. Baker, Travancore, is $15\frac{3}{4}$ inches by $8\frac{3}{4}$ inches, and the British Museum specimen is an inch and a quarter less in length and $\frac{1}{8}$ th of an inch less in girth.

THE SEROW OR 'HIMALAYAN GOAT ANTELOPE.

Nemorhaedus bubalinus.—Indian names : *Serow*, North-Western Himalayas ; *Salabhir Ramu halj*, Kashmir ; *Goa*, Chamba ; *Yamu*, Kulu ; *Gaya*, Sikkim ; *Einu*, on the Sutlej ; *Paipa*, Shan States.

Habitat.—Throughout the Himalayas from 6,000 to 12,000 feet.

Period of gestation.—Eight months ; usually one at a birth.

Description.—“An extraordinary mixture of antelope, goat, sheep and donkey” fairly well describes this animal. It has a large head and ears and a heavy body ; coarse, thin hair of moderate length, with a crest from the nape to the withers. It is blackish grey above with a black head and neck, the darker colour merging into rusty red on the sides and insides of the limbs ; the belly being a dirty white, muzzle and chin the same colour. Horns black.

It has an awkward gait, but is a good climber. It is solitary as a rule ; found in thick forest or rocky hill-sides, and it shelters in caves, under trees and overhanging rocks. Shy and difficult to stalk, it is fierce and dangerous when brought to bay. Its alarm cry is a combination of steam whistle and snort. Its flesh is coarse.

Measurements.—Average height at shoulder, 38 inches ; average horn measurements, 10 inches ; girth, 5 to 6 inches ; length from horns to root of tail, 50 inches ; weight over 200 lb.

Record heads.—Mr. E. C. Stuart Baker, the well-known Indian sportsman and naturalist, holds the record with a head that measures as follows :—Right horn, $12\frac{3}{4}$ inches ; left horn, $12\frac{5}{8}$ inches ; girth, 6 inches. Col. A. E. Ward in his *Sportsman's Guide*, records 12 inches, shot in the Ganges Valley, and Mr. A. P. Davis sends me the following particulars of a fine head shot in Garhwal :—Right horn,

10½ inches; left horn, 9¾ inches; girth, 5½ inches; tip to tip, 3½ inches. There are specimens in the British Museum of 9¾ and 9½ inches. Baldwin, in his old-fashioned book of sport, talks of a 13½-inch specimen.

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.		
12¾ rt. 12½ lft. }	6	..	....	E. C. Stuart Baker, F.Z.S.
12	..	..	Ganges Valley ..	Col. A. E. Ward.
10¾	5	4	Mussoorie ..	V. A. Mackinnon.
10	..	..	Garhwal ..	Lieut. C. J. Ratcliff.
10	..	..	Kumaon ..	Col. A. E. Ward.
10	..	..	Budraj, near Dehra ..	Ditto.
9½	..	..	Naini Tal, Kumaon ..	A. E. C. Casey, I.C.S.
9½	5½	3¾	Ruby Mines District, Burma.	J. P. Cool.
9½	5	2½	Sunda Valley, Tunnan ..	Indian Museum.
9½	4¾	3¾	Bhutan ..	R. M. Woods.
8¾	5½	4¾	....	Officers' Mess, 3rd Gurkhas.
8½	5	3¼	Kumaon ..	Lieut.-Col. C. E. Nichol.
8	4½	3½	Ditto ..	Ditto.
7½	5	4	Bhutan ..	R. M. Woods.

THE BURMESE GOAT ANTELOPE.

Nemorhaedus sumatrensis.—Indian names : *Tou-tshiek*, Burmese ; *Tau-mayin*, Pegu.

Habitat.—Assam, Burma and Siam.

Period of gestation.—Eight months.

Description.—Closely resembling the Serow, it is more rufous in colour and a trifle smaller.

Measurements.—An adult male is 36 inches at shoulder ; girth of body, 36 inches ; horns, 8 to 9 inches ; length from nose to root of tail, 50 inches.

Record heads.—There is a $9\frac{1}{2}$ -inch specimen in the British Museum from Sumatra and one of the same measurement in the Indian Museum, presented by Sir A. Phayre from the Arrakan Hills. The Perak Museum has one of $8\frac{3}{4}$ inches, and in his book dealing with sport in Burma, Mr. W. S. Thom records a female, the horns of which measured 7 inches. Mr. C. B. Moggridge records an 8-inch specimen to his own rifle. The largest heads are credited to Burma and are said to be 11 inches and 10 inches respectively.

Length.	Girth.	Tip to tip.	Height.	Weight.	Place.	REMARKS.
Inches.	Inches.	Inches.	Ft. Ins.	Lb.		
9 $\frac{3}{4}$	5 $\frac{1}{2}$	3 $\frac{3}{8}$	..	..	N. Chin Hills	Capt. J. E. Colenso.
9 $\frac{1}{2}$	5 $\frac{3}{4}$	4	3 10	180	Burma ..	C. W. A. Bruce. $\frac{1}{2}$
				clean.		
9 $\frac{1}{2}$	5 $\frac{1}{2}$	5 $\frac{1}{2}$	..	..	Ditto ..	A. Weston.
9 $\frac{1}{4}$	5 $\frac{7}{8}$	5 $\frac{3}{8}$	..	..	Ditto ..	Vety.-Capt. G. H. Evans.
9 $\frac{1}{4}$	6 $\frac{1}{4}$	3 $\frac{1}{2}$	..	..	Bhamo ..	Lieut. R. B. N. Woods.
9	6	5 $\frac{1}{4}$	..	..	Burma ..	Vety.-Capt. G. H. Evans.
8 $\frac{1}{2}$	6	5	..	..	Bhamo ..	Lieut. R. B. N. Woods.

THE THAKIN.

Budorcas taxicolor.—Indian name: *Thakin* or *Thakon*.

Habitat.—The Assam frontier and the Mishmi Hills.

Description.—A heavily-built goat-antelope type of animal, very like the Serow, short tail, large hoofs, large head with convex profile, thick and large horns curving somewhat like those of a buffalo. Head black, body varying in colour from pale dun to deep reddish brown.

Measurements.—Length, 6½ feet; height, 3½ feet; tail, 3 inches; skull, 18 inches long by 7¾ inches wide; horns, 18 to 25 inches long in males and from 10 to 13 inches in girth.

Length.	Girth.	Tip to tip.	Widest spread.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.		
25 1ft.	13 1ft. }	11½	13½	Assam ..	F. Needham, C.I.E.
24½ rt.	12½ rt. }	12½	12½	Mishmi Hills ..	Indian Museum.
24½	11½				Lieut. F. P. Nosworthy.
23½ 1ft. }	11½	12	15½	Sadya, N. Assam ..	F. Needham, C.I.E.
21½ rt. }			12½	Assam ..	British Museum.
23	15½	10½	13½	Ditto	B. N. History Society's Museum.
22½	10½	14½	12½	Mishmi Hills ..	L. W. Middleton.
22	12½	12½	12	....	Ditto.
21½	11	11½	11		
18	10	10½			

THE GORAL.

Cemas goral or *memorhodus goral*.—Indian names: *Goral*, North-Western Himalayas; *Pij*, *Pijur*, *Rai*, *Rom*, Kashmir; *Sah*, *Sarr*, Sitlej Valley; *Suh ging*,

Lepcha; *Ra-giyau*, Sikkim and Bhutan; *Deo chagol*, Assam; commonly *Gwer*, *Gwerur* in Kumaon.

Habitat.—Himalayas, from Kashmir to Bhutan, between 3,000 and 8,000 feet; also in the Naga and Chin Hills and parts of Assam.

Period of gestation.—Six months; one at a birth in May or June.

Description.—One of the commonest and least fearless of Himalayan animals. It is goat-like in form, with stout limbs and coarse hair, a small crest running from the nape to the withers; the colour is brown and much paler below; the face pale but darkening towards the horns; a black line from the nape to the tail; dark line down the front of each leg. Throat white, tail black, horns black and sub-parallel scarcely diverging.

It associates in parties of from four to eight, haunts grassy hills or rocky ground in the midst of forest, feeds morning and evening as a rule. Old males are generally solitary. The alarm note is a hissing snort.

Measurements.—Height at shoulder, 27 inches; length from snout to root of tail, 50 inches; tail, 4 inches; horns of males, 6 to 8 inches, of females, less.

Record heads.—Heads of over 9 inches are rare, but have been occasionally recorded. "Jonas" (*Asian*, 15th August, 1882) describes a pair of horns $9\frac{3}{4}$ inches: Mr. H. B. Simons shot a specimen in Mussoorie carrying horns of $9\frac{1}{16}$ inches and

9 $\frac{1}{4}$ inches right and left, respectively. Col. A. E. Ward writes me that he has shot Gorals with heads of 8 $\frac{1}{2}$ and 8 inches in Kumaon; the best specimen in the British Museum is 7 $\frac{3}{8}$ inches; that in the Indian Museum is 7 inches only and was presented by Mr. Hodson.

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches. 8 $\frac{1}{2}$	Inches. 3 $\frac{3}{4}$	Inches. 3 $\frac{3}{4}$	Mussoorie ..	V. A. Mackinnon. (<i>Picked up.</i>)
8 $\frac{3}{8}$	..	..	Pader, Kishtwar	P. F. Hadow.
8 $\frac{1}{2}$	3 $\frac{3}{4}$	..	Wadwan	} Lieut. H. W. Andrewes.
8 $\frac{1}{2}$	3 $\frac{3}{4}$	1 $\frac{1}{2}$	Duchan, Kishtwar	V. A. Mackinnon.
8	4 $\frac{1}{4}$	3 $\frac{3}{8}$	Mussoorie ..	Capt. J. T. O. Murray.
8	4	2 $\frac{3}{4}$	Chamba	P. F. Hadow.
7 $\frac{1}{2}$	..	..	Duchan, Kishtwar	A. E. O. Casey, I.C.S.
7 $\frac{1}{2}$	..	..	Kumaon	P. F. Hadow.
7 $\frac{1}{2}$	..	..	Duchan, Kishtwar	Capt. N. L. Larnmouth.
7 $\frac{1}{2}$	..	2 $\frac{1}{2}$	Telari Garhwal	Capt. M. B. P. Reeve, 58th F. R. J ^l .
7 $\frac{1}{2}$	..	..	Chamba	A. P. Davis.
7 $\frac{1}{2}$	4	..	Garhwal	Officers' Mess, 37th Dogras.
7 $\frac{1}{2}$	..	..	Ditto	Lieut. Sir T. Roberts, <i>Bart.</i>
7 $\frac{1}{2}$	3 $\frac{3}{4}$	3 $\frac{3}{8}$	Garhwal	P. F. Hadow.
7 $\frac{1}{2}$	4	..	Pader, Kishtwar	Capt. M. E. Dopping Heponstal.
7 $\frac{1}{2}$	4	2 $\frac{3}{4}$	Kumaon ..	..

Length.	Girth.	Tip to tip.	Place.	Remarks.
Inches.	Inches.	Inches.		
7 $\frac{1}{2}$	..	3 $\frac{1}{2}$	Kishtwar ..	Lieut. F. F. Gillies.
7 $\frac{1}{2}$	..	..	Kumaon ..	A. E. C. Casey, I.C.S.
7	3 $\frac{3}{8}$	..	Kishtwar ..	Capt. G. H. Davis.
7	..	..	Kumaon ..	A. E. C. Casey, I.C.S.
7	..	..	Gairwal ..	Ditto.
7	..	..	Mussoorie ..	Capt. S. H. Charrington.
8 $\frac{3}{8}$	..	..	Chernab ..	Lieut. O. J. Fooks.
8 $\frac{3}{8}$	3 $\frac{1}{4}$	3 $\frac{1}{2}$	Kumaon ..	Lieut.-Col. C. E. Nichol.
8 $\frac{3}{8}$	3 $\frac{1}{4}$	3 $\frac{1}{5}$	Almora ..	Capt. G. H. Channer.
8 $\frac{1}{2}$	3 $\frac{3}{8}$	..	Kajneg ..	Lieut. B. H. Selby.
8 $\frac{1}{2}$	3 $\frac{3}{8}$	3 $\frac{1}{2}$	Gairwal ..	Lieut.-Col. C. E. Nichol.
8 $\frac{1}{2}$	..	..	Tehri Gairwal ..	Capt. S. H. Charrington.
8 $\frac{1}{2}$	..	4 $\frac{1}{2}$	Bhutan ..	R. M. Woods.
8 $\frac{1}{2}$	4 $\frac{1}{2}$	3	Kumaon ..	Capt. M. E. Dopping Hepenstal.
8 $\frac{1}{2}$	3 $\frac{3}{8}$	3	N. Chin Hills ..	Capt. J. E. Colenso.
8	3 $\frac{1}{2}$	1 $\frac{7}{8}$	Kishtwar ..	Lieut. F. F. Gillies.

THE NILGAI OR BLUE BULL.

Bos elephas tragocamelus or *Portax pictus*.—Indian names: *Nilgau*, male; *Nilgai*, female; *Rojh*, *Rojra*, Hind.; *Rui*, Decan and Guzerat; *Neelal* and *Guraya*,

Gond ; *Murru*, Kole ; *Monu-potu*, Tamil ; *Mannu potu*, Telugu ; *Murru* or *Marru*, Canarese ; *Roz*, Kathiawar.

Habitat.—The Indian Peninsula from base of the Himalayas to Southern

Mysore ; it is not found in Eastern Bengal or Assam.

Period of gestation.—Between eight and nine months ; one or two at a birth.

Description.—Equine in form ; deep and compressed neck, tail reaching hocks. Adult males are dark grey with mane, throat tuft and tail tip black. The lips, chin, lower surface of tail, belly and fetlocks are white ; horns black ; the females and young are brown. The cow is hornless, but rarely a barren cow assumes the male characteristics, namely, the horns, mane, long black throat tuft, and the iron grey or blackish coat. Thin bush, scrub and grassy plains are their usual haunts. They infest cultivated plains and do much damage to crops. The males are often solitary, though old bulls occasionally herd together. They feed throughout the day grazing and browsing ; they drink very rarely. Their gait is a heavy gallop, but they go much faster than they appear to. They have miserable heads, and few sportsmen shoot them except for meat. They can be tamed and used as beasts of burden ; the flesh is fairly good.

Measurements.—Average height at shoulder, 54 inches ; average horn measurement, 7 inches.

Record heads.—The best head on record was on an old bull shot by Lieut. T. S. Jobson at Hulki in the Jubbulpore District. The measurements were :—Left horn (along horn), $10\frac{7}{8}$ inches ; (from base direct to point), 10 inches ; girth, $8\frac{3}{4}$ inches ; right horn (along horn), $10\frac{1}{4}$ inches ; (from base to point), $9\frac{7}{8}$ inches ; girth, $9\frac{3}{4}$ inches ; tip to tip, $5\frac{3}{8}$ inches. Baldwin (page 186) says, he saw a pair $10\frac{1}{2}$ inches long. The nearest approach to this is the 10-inch specimen, details of which follow : the British Museum specimen is $9\frac{1}{4}$ inches and that in the Indian Museum, presented by Mr. J. Cockburn, $8\frac{3}{4}$ inches. Col. L. L. Fenton wrote to me of an $8\frac{1}{4}$ -inch head he got some years ago in Kathiawar.

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.		
10	$8\frac{1}{4}$	5	Jagner	Lieut. J. W. Pickthall.
$9\frac{1}{6}$	$7\frac{3}{8}$	$6\frac{3}{8}$	C. P.	Lieut. Rawlence.
$9\frac{1}{2}$	$8\frac{1}{2}$	7	Nimar, C. P. ..	Lieut. R. D. Gardner.
$9\frac{3}{8}$	..	..	Mutra	Lieut. M. A. Muir.
$9\frac{1}{5}$	..	3	C. P.	Lieut. F. F. Gillies.
$9\frac{1}{4}$	..	..	Roomal, C. P. ..	J. F. Holmes.
$9\frac{1}{8}$	..	..	Ditto	Ditto.
9	8	6	N. Circars	W. H. Pitt.

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.		
9	7 $\frac{1}{2}$	6 $\frac{1}{4}$	C. P. Muttra ..	Lient. Rawlence.
9	7	7	Ditto ..	Capt. S. H. Charrington.
11	7	7	Khodri, C. P. ..	Ditto.
9	..	..	C. P. U. P. ..	Capt. A. Maeta viah, 3rd Brahmins.
9	..	..	Oudh ..	Maj. A. G. Brenner.
9	7	..	N. Circars ..	Lient. P. Shepherd.
8 $\frac{1}{2}$	..	6	Narsinghpur ..	G. Rose.
8 $\frac{1}{2}$	8	5 $\frac{1}{2}$	Ditto ..	W. H. Pitt.
8 $\frac{1}{2}$	8	5 $\frac{1}{2}$	Muttra ..	J. H. McNeale.
8 $\frac{1}{2}$	..	5	Kaknat, C. P. ..	Ditto, Officers' Mess, 3rd Gurkhas.
8 $\frac{1}{2}$	..	..	N. Circars ..	Lient. G. A. Hassels-Yates.
8 $\frac{1}{2}$	6 $\frac{3}{8}$	7 $\frac{1}{2}$	Muttra ..	W. H. Pitt.
8 $\frac{1}{2}$	6	6	Mandwa, C. P. ..	Capt. S. H. Charrington.
8 $\frac{1}{2}$	7 $\frac{1}{2}$	8 $\frac{1}{4}$	N. Circars ..	Lient. B. H. Selby.
8 $\frac{1}{2}$	..	7 $\frac{1}{4}$	Nimar, C. P. ..	W. H. Pitt.
8	7	8	Chindwin District	Lient. R. D. Gardner.
8	..	..	Muttra ..	Col. L. L. Fenton.
8	..	..		Maj. P. Lea Birch, R. A.
7 $\frac{1}{2}$	..	..

THE FOUR-HORNED ANTELOPE.

Tetracerus quadricornis.—Indian names : *Charsinga*, *Chausinga*, *Chunka doda*, Hind. ; *Benkra*, Mahr ; *Bhokra*, Gujr. ; *Bhir* or *Kotra*, Gond. ; *Menda*, Kurku ; *Kotari*, Chota Nagpur ; *Jungli bukri*, Deccan ; *Guntla* or *Botad*, Kathiawar ; *Kurang*, Konkan ; *Kond kuri*, Canarese ; *Kard kuri*, Telegu.

Habitat.—Along the base of the Himalayas, from the Punjab to Nepal, and downwards throughout the Peninsula, except in Lower Bengal and the Malabar Coast in Madras.

Period of gestation.—Six months ; the young are born in January or February.

Description.—The usual antelope coat of thin, harsh, short hair, of a pale brown above, passing on the sides and limbs into the white of the lower parts. A dark stripe down the front of each leg, and in some animals down the back. It has four horns, the posterior usually 3 to 4 inches, the anterior 1 to $1\frac{1}{2}$ inches. It is not gregarious, seldom more than two being seen together. It haunts thin jungle on undulating ground ; it drinks daily and never ranges far from water ; it is shy and moves with a peculiar jerky action whether walking or running.

Measurements.—Height at shoulder, 25 inches ; at croup, 27 inches ; length from muzzle to rump, 42 inches. Weight, 43 lb. The females are smaller.

Record heads.—The record is 5 inches, and then we have several heads, from 4 inches to $4\frac{1}{2}$ inches; in the British Museum there is one of 4 inches and in the Indian Museum one of $3\frac{3}{4}$ inches which came from the Central Provinces, and was presented by the late Mr. W. T. Blandford.

LENGTH.		GIRTH.		TIP TO TIP.		Place.	REMARKS.
Rear.	Front.	Rear.	Front.	Rear.	Front.		
Inches.	Inches.	Inches.	Inches.	Inches.	Inches.		
$4\frac{3}{8}$	$1\frac{7}{8}$	..	..	..	..	Chindwin Dist.	Col. L. L. Fenton.
$4\frac{3}{8}$	$1\frac{5}{8}$	..	..	..	..	Ditto ..	Ditto.
$4\frac{1}{4}$	$1\frac{3}{4}$	..	..	..	..	Kaknar, C. P.	Lieut. G. A. Hassells-Yates.
4	$2\frac{3}{4}$	..	..	..	..	Berar ..	Maj. R. G. Burton.
4	$1\frac{3}{4}$	$2\frac{1}{2}$	$2\frac{1}{4}$	$2\frac{7}{8}$	$\frac{5}{8}$	Nimar, C. P.	Lieut. R. D. Gardner.
4	$1\frac{1}{2}$	$2\frac{1}{2}$	..	$2\frac{1}{2}$	..	Chikalda ..	Capt. A. I. R. Glasfurd.
$3\frac{3}{4}$	$\frac{3}{4}$	..	..	..	..	Kumaon ..	A. E. C. Casey, I.C.S.
$3\frac{5}{8}$	$\frac{1}{2}$	..	..	..	..	N. Circars ..	W. H. Pitt.
$3\frac{1}{2}$ ft.	$\frac{1}{2}$	..	..	..	..	Ditto ..	Ditto.
$3\frac{3}{8}$ rt.	$\frac{1}{2}$	..	..	..	..	C. P. ..	Lieut. F. F. Gillies.
$3\frac{1}{2}$	2	..	..	..	..	Berar ..	Maj. R. G. Burton.
$3\frac{1}{2}$	..	..	..	..	..	Aheri, C. P. ..	Capt. S. H. Charrington.
$3\frac{1}{2}$	$1\frac{1}{2}$	..	..	..	..	N. Circars ..	W. H. Pitt.

THE BLACK BUCK OR INDIAN ANTELOPE.

Antelope cervicapra.—Indian names : *Gua* (male) ; *Harin*, Hind. ; *Kala* (male), *Goria* (female), Tirhoot ; *Barant sasla*, Nepal ; *Bamani harin*, Oriya ; *Veliman*, Tamil ; *Chigri*, *Hoolay-kerra* and *Jinki*, Canarese ; *Kalyar* (male), *Reda* (female), Kathiawar ; *Bureta*, Bhagalpur ; *Hiru*, Mahr.

Habitat.—Throughout the plains of India, though very rarely in Bengal. They are most abundant in the U. P., Rajputana and the Deccan.

Period of gestation.—Six months ; one or two at a birth.

Description.—Does and young bucks are yellowish fawn above and white below and on the inside of the limbs, the colours being sharply divided. Old bucks are blackish brown and white. The horns vary in divergence and closeness of spiral : horned females are very rare.

It affects open plains of short grass and cultivated lands and associates in herds. Never enters forest or high grass and rarely affects bushes ; it is extremely wary in districts where it is much disturbed. Its flesh is excellent. It is stalked and shot, run down on horseback and speared, and is the usual quarry of the hunting leopard. Its sight and smell are keen and its pace very swift. It is a bellicose animal, the bucks fighting continually.

Measurements.—Average height at shoulder, 2 feet 8 inches ; average weight, 85 lb. Horns of adult are usually 16 to 20 inches, and the longest horns are found in Rajputana.

Record heads.—The longest pair of horns which I find recorded were those of a buck shot on the Mohun Pass, and "Gangootri Shikari" (*Asian*, 27th April, 1880) measured this head $30\frac{3}{4}$ inches. Col. C. J. Garstin, I.S.C., in the 'sixties shot a buck at Ferozepore in the Punjab with 30-inch horns. These are mentioned in the *Asian*. 9th August, 1887, with circumstantial details by Mr. A. E. C. Casey, I.C.S. ; "J. V. S." (*Asian*, 4th June, 1886) gives $28\frac{1}{8}$ inches, got in the Saugor District by Mr. Browner of the Midland Railway Survey, as the best head he had ever seen. A few 28-inch heads are recorded by "Triangle" and "Blood" and A. E. C. Casey in Indian sporting papers in the days when anything over 26 inches was considered impossible. Heads over 25 inches are rarely got nowadays, a 24-inch specimen being considered distinctly good.

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.		
27	$5\frac{1}{4}$	$18\frac{1}{4}$	Patiala	Maj. E. G. Howlett, 3-2nd Punjab Regt.
27	..	..	C. P.	A. M. Long.

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.		
27	5	..	Harda, C. P.	H. Tucker.
26	5	..	Indore ..	Lady Jonkine.
26	4 $\frac{7}{8}$	..	Narsingpur ..	J. H. McNeale.
25 $\frac{5}{8}$	5	16 $\frac{1}{2}$	Barsi, G. I. P. Ry.	S. Thunder.
25 $\frac{1}{2}$	5 $\frac{1}{2}$	14	Perozepore ..	Officers' Mess, 37th Dogras.
25 $\frac{1}{2}$	..	20	Jagner ..	Lieut. F. Masters.
25	5 $\frac{1}{8}$	..	Hissar ..	Capt. A. J. E. Dawson.
25	4 $\frac{1}{2}$	10	Wadhwan ..	Col. L. L. Renton.
25	..	..	Hallur, S. M. R.	Lieut. Norton, Carabineers.
24 $\frac{1}{2}$	5	17	Kythai ..	Lieut. B. H. Selby.
24 $\frac{1}{2}$	..	..	Harda, C. P.	W. Wright Neville.
24 $\frac{1}{2}$	..	..	Hallur, S. M. R.	Lieut. Lloyd, Carabineers.
24 $\frac{1}{2}$	..	..	Kagerol ..	Maj. P. Lea Birch, R. A.
24 $\frac{1}{2}$	5	14 $\frac{1}{8}$	Perozepore ..	Officers' Mess, 37th Dogras.
24	..	..	Jagner ..	Maj. P. Lea Birch, R. A.
24	..	..	Kagerol ..	Ditto.
24	..	..	Jagner ..	Capt. A. Maotavish, 3rd Brahmans.
23 $\frac{7}{8}$	..	14	Ditto ..	Lieut. E. Masters.
23 $\frac{7}{8}$	..	..	Agwa ..	Maj. P. Lea Birch, R. A.
23 $\frac{3}{4}$	..	..	Nyagaon ..	Ditto.
23 $\frac{3}{4}$	..	..	Gwalior ..	Lieut. G. Shepherd, 63rd Sikhs.

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.		
23 $\frac{1}{4}$	..	..	Muttra	Lieut. R. P. Wells.
24 $\frac{1}{4}$	..	..	Mainpuri	E. G. Browne.
23	..	..	Patiala	Maj. C. M. Priestley.
23	..	..	Hissar	Ditto.
22 $\frac{3}{4}$	4 $\frac{1}{2}$	22 $\frac{5}{8}$	Sirsa, Hissar ..	Lieut. Sir T. Roberts, <i>Bart.</i>
22 $\frac{1}{4}$	..	..	Delhi	Lieut. P. Shepheard.
22 $\frac{1}{2}$	5	19	Bikanir	Capt. G. P. Evans.
22 $\frac{1}{4}$	..	17	Deccan	Lieut. F. F. Gillies.
21 $\frac{7}{8}$	5 $\frac{1}{4}$	21 $\frac{1}{8}$	Karnul	Lieut. B. H. Selby.
21 $\frac{1}{2}$	4 $\frac{1}{4}$	14	Seohara (Bijnor) ..	R. M. Woods.

THE TIBETAN ANTELOPE OR CHIRU.

Pantholops hodgsoni.—Indian names: *Chiru chuhu*, Tibetan; *Tsus* (male), *Chus* (female).

Habitat.—Throughout Tibet from 12,000 to 18,000 feet; also found in Northern Ladak and North of Sikkim.

Description.—Pale fawn above with pinkish or slaty grey hair towards the base which verges into white at the root. Face dark brown with a brown or black streak down the front of each leg in males; no black marks on females. Fur very thick and close with a strong *pushm*. A very shy animal, the sexes living apart in summer. It keeps to the plains and open valleys, affects the neighbourhood of streams, and digs holes deep enough to conceal itself.

Period of gestation.—Six months; a single young being produced in summer.

Measurements.—Height at shoulder, 32 inches; length from nose to rump, 50 inches; tail, 9 inches; ear, $5\frac{1}{2}$ inches; girth of body, 39 inches. (Hodgson) Average horns 24 inches.

Record heads.—In recent years no head of over 27 inches has been recorded, but Brian Hodgson, when he originally described the Chiru, gave the horn

measurement as 30 inches. Col. A. E. Ward, in his *Sportsman's Guide*, gives 26 inches as the length of a pair of horns got by him in Ladak. Genl. A. A. A. Kinloch says he has heard of 28-inch horns, but the best pair shot by himself were $25\frac{1}{2}$ inches. The Indian Museum specimen is $25\frac{1}{4}$ inches by 6 inches.

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.		
27	$5\frac{5}{8}$	$14\frac{1}{2}$	Mansonawar Lake, Tibet	Capt. G. K. Channer.
27	$5\frac{1}{4}$	..	N.-W. Tibet ..	P. F. Hadow.
$26\frac{1}{2}$	$5\frac{1}{2}$	$10\frac{1}{8}$	Mansonawar Lake, Tibet	Capt. G. K. Channer.
$25\frac{3}{4}$	$5\frac{3}{4}$	$14\frac{1}{2}$	....	A. E. C. Casey, I.C.S.
$25\frac{1}{4}$	$5\frac{1}{2}$	$13\frac{1}{2}$	Tibet	Lieut. F. F. Gillies.
25	$5\frac{5}{8}$	$13\frac{1}{8}$	Mansonawar Lake, Tibet	Capt. G. K. Channer.
25	$5\frac{1}{8}$	$11\frac{1}{2}$	Ditto ..	Ditto.
$24\frac{1}{4}$	$5\frac{1}{4}$	9	Ditto ..	Ditto.
24	..	12	N.-W. Tibet ..	Capt. S. H. Charrington.
$23\frac{1}{2}$	..	19	Ditto	Ditto.
$23\frac{1}{2}$	..	$12\frac{1}{4}$	Tibet	Lieut. F. F. Gillies.
$23\frac{1}{4}$	..	$11\frac{1}{2}$	Ditto	Ditto.
$23\frac{1}{8}$	$5\frac{1}{8}$	$11\frac{7}{8}$	Changchenmo ..	Lieut. B. H. Selby.

THE INDIAN GAZELLE, CHINKARA OR RAVINE DEER.

Gazella bennetti.—Indian names : *Chinkara*, *Kalpunch*, Hind. ; *Phanskela*, U. P. ; *Ask*, Baluch. ; *Kalsipi*, Mahr. ; *Tiska*, *Mudari*, Can. ; *Sankhuli*, Mysore ; *Burudu jinka*, Tel. ; *Merrik*, Gond. ; *Hirni*, Punjab.

Habitat.—The plains and low hills of the United Provinces and Central India, Baluchistan, Punjab, Sind and Rajputana, Bombay and Madras to south of the Kistna.

Description.—Light chestnut above ; white on sides and buttocks ; chin, breast and lower parts white ; tail black ; knee brushes dark brown ; a whitish streak down each side of the face, which is dark rufous. Both sexes are horned ; those in the male nearly straight, the number of rings usually being 15 or 16.

It is usually seen in small parties in ravines and waste ground, seldom on alluvial plains or near cultivation ; sand-hills it is particularly partial to, and it abounds in the Indian deserts. Grass and leaves are its food, and it is said never to drink. It is very swift, not particularly wary, and when alarmed, stamps its fore-feet and hisses through the nose, hence “Chinkara”—the Sneezer. The flesh is excellent.

Measurements.—Average height at shoulder, 26 inches ; average horn measurement, 11 inches. Weight of bucks, 50 lb. ; of does, 40 lb.

Record heads.—The record is a $15\frac{1}{4}$ -inch head shot by Mr. L. E. Banfield in the Lahore District. There is a 15-inch head now in the possession of the Rana of Jhalawar. A buck with $14\frac{1}{2}$ -inch horns was shot by Baldwin at Jhansi, and a $14\frac{3}{4}$ -inch head is owned by Mr. Meredyth-Young, details of which I give below:—“Truthful James” (*Asian*, 18th July 1882) reports a Chinkara with $13\frac{3}{4}$ -inch horns got in the Jhelum District. The Indian Museum head measures 12 inches, and anything above that is a good head.

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.		
$15\frac{1}{4}$ lft.	..	..	Lahore Dist.	.. L. E. Banfield.
$14\frac{3}{4}$	..	..	Jhelum ..	.. A. Meredyth-Young.
$14\frac{3}{4}$	$4\frac{1}{2}$	$7\frac{5}{8}$	..	.. Capt. A. G. Wauchope.
$14\frac{1}{2}$	..	..	Jalaun Dist., U. P.	.. L. McDowell.
$14\frac{1}{2}$ lft. } $13\frac{5}{8}$ rt. }	$4\frac{5}{8}$	6	Punjab ..	.. Capt. S. A. Cooke.
$13\frac{3}{4}$	$4\frac{3}{4}$	$6\frac{1}{4}$	Muttra ..	.. Officers' Mess, 15th Hussars.
$13\frac{1}{2}$ lft. } 13 rt. }	..	..	Attock ..	.. H. B. Simons.
$13\frac{1}{4}$	$4\frac{1}{8}$	$8\frac{3}{4}$	Bikanir ..	.. Capt. G. P. Evans.

THE TIBETAN GAZELLE.

Gazella pecticaudata.—Indian name: *Gou*, *ragou*, Tibetan.

Habitat.—The Tibetan plateau from 13,000 to 18,000 feet, Ladak, Northern Nepal and Sikkim.

Description.—Sandy fawn above, merging into white below; the tail has a white caudal disc and a brown or black tip. Females hornless. Male horns slender, much curved, diverging, and the tips curving forwards. No knee brushes. Tail and ears very short. It is not shy, associates in small parties on bleak plains.

Measurements.—Height at shoulder, 22 inches; length from snout to rump, 42 inches; average horns, 12 inches.

Record heads.—There is only one head recorded of over 14 inches. I give below details of a couple of 14 inches specimens; that in the Indian Museum, presented by Col. Jenkins in 1846, measures $13\frac{1}{4}$ inches. Horns of between 11 and 12 inches are common.

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.		
14	..	..	Ladak	Maj. Brown, R. H. A.
14	..	..	Ditto	O. C. Winn.
13	3 $\frac{3}{4}$	4 $\frac{7}{8}$	....	A. E. C. Casey, I.C.S.
13	3 $\frac{1}{2}$	..	Rupshu, Ladak ..	Lieut. F. W. A. Wells.
12 $\frac{1}{2}$	3 $\frac{5}{8}$	4	Tibet	Officers' Mess, 3rd Gurkhas.
12 $\frac{3}{4}$	..	5 $\frac{2}{3}$	Ditto	Lieut. F. F. Gillies.
12 $\frac{1}{2}$	4	..	Ladak	Capt. G. H. Davis.
12 $\frac{1}{2}$	3 $\frac{3}{4}$	6 $\frac{1}{4}$	Cholomo, N. Sikkim ..	Capt. A. L. M. Molesworth.
12 $\frac{1}{2}$	3 $\frac{1}{2}$	..	Ladak	P. F. Hadow.
12 $\frac{1}{2}$	3 $\frac{1}{2}$	5 $\frac{1}{2}$	Tibet	Capt. G. K. Channer.

THE MUNTJAC, KAKUR OR BARKING DEER.

Capreolus muntjac.—Indian names: *Kakur*, *Jungli bukra*, Hind.; *Ruthwa*, Nepal; *Karsiar*, Bhutan; *Sikku*, Lepcha; *Maya*, Beng.; *Gutra* (male), *Gutri* (female), *Bherki* and *Korta*, Gond; *Menda*, Kurku; *Bakra*, Mahr.; *Karikari*, Can.; *Kukagori*, Tel.; *Kalai*, Tam.; *Gyi*, Burma. In Southern India vulgarly known as the "jungle sheep" or *jungli bukri*.

Habitat.—Throughout India and Burma, on all thickly-wooded hills, never in the plains or away from tree-forest.

Period of gestation.—Six months ; one or two at a birth.

Description.—Deep chestnut body, darker on the back, paler below. Face and limbs brown, a dark line down the inside of each horn pedicle. Chin, throat, belly and inside thighs white. Young spotted. Horns drop in May, and the new horns are perfect in August. The horns spring from a long pedicle. Tongue of extreme length ; it can lick its whole face with it.

It is solitary, a dainty walker, swift and wonderfully clever at getting through jungle, running with head low and stern high. Its call is very loud for its size (something like a dog's bark), and it indulges in it morning and evening, uttering it when alarmed or calling its mate. At bay it uses its canine teeth and can inflict severe wounds. It often makes a rattling castanet-like sound when running ; cause unknown. The flesh is good.

Measurements.—Average height at shoulder, 23 inches ; average horn measurements, $4\frac{1}{2}$ inches (from fur). Males weigh about 40 lb.

Record heads.—The record is 10 inches (horn 6 inches and pedicle 4 inches), shot by Mr. R. B. Hutchins at Yamethin, Burma. Other fine specimens of which we have particulars are those shot by Mr. D. H. Allan and Mr. Murray Stewart,

details of which are given. There is also one of $8\frac{3}{8}$ inches credited to Mr. W. H. Wilson. Between 6 and $7\frac{1}{2}$ inches we have records of several, including one by Col. A. E. Ward of $7\frac{1}{2}$ inches and the British Museum specimen $6\frac{1}{2}$ inches. The Indian Museum possesses a head presented by Mr. A. Mason with $8\frac{1}{4}$ inches horns.

Length.		Girth.	Tip to tip.	Place.	REMARKS.
Inches.		Inches.	Inches.		
Rt.	{ Horn 6 Pedicle 4 }	10	$3\frac{1}{2}$	Yamethin, Burma ..	R. B. Hutchins.
Lft.	{ Horn 6 Pedicle 4 }	10	$3\frac{1}{2}$		
Rt.	{ Horn 6 Pedicle $2\frac{1}{2}$ }	$9\frac{1}{2}$	..	U. Chindwin, Burma ..	D. H. Allan.
Lft.	{ Horn $6\frac{1}{4}$ Pedicle $3\frac{1}{4}$ }	$9\frac{3}{4}$..		
Rt.	{ Horn $6\frac{3}{4}$ Pedicle $2\frac{3}{4}$ }	$9\frac{1}{2}$	..	L. Burma ..	Murray Stewart.
Lft.	{ Horn 7 Pedicle $2\frac{3}{4}$ }	$9\frac{3}{4}$..		
Rt.	{ Horn $5\frac{7}{8}$ Pedicle $3\frac{5}{8}$ }	$9\frac{1}{2}$	$4\frac{1}{4}$	....	W. St. George Ash.
Lft.	{ Horn $5\frac{3}{4}$ Pedicle $3\frac{3}{8}$ }	$9\frac{3}{8}$	$4\frac{1}{4}$		

Length.		Girth.	Tip to tip.	Place.	REMARKS.
Inches.		Inches.	Inches.		
	Horn 5 } 9½ Pedicel 4½	2½	3½	Kyaukse Dist., U. Burma.	Capt. G. H. Davis.
Rt.	{ Horn 5½ } 9 Pedicel 3½	..	..	Mussoorie ..	H. B. Simons.
Lft.	{ Horn 6½ } 9½ Pedicel 3½	..	..	U. Chindwin, Burma ..	D. H. Allan.
Rt.	{ Horn 6½ } 9½ Pedicel 3	..	..	L. Burma ..	Murray Stewart.
Lft.	{ Horn 5½ } 8½ Pedicel 3	..	..	Yamethin, Burma ..	R. B. Hutchins.
Rt.	{ Horn 6½ } 9½ Pedicel 2½	..	..	Myitkyina, Burma ..	Capt. J. E. Colenso.
Lft.	{ Horn 6 } 8½ Pedicel 2½	..	..	Naini Tal ..	Lieut. Sir Thomas Roberts Bart.
Rt.	{ Horn 5 } 9 Pedicel 4	4½	3½		
Lft.	{ Horn 4 } 8 Pedicel 4	4½			
	Horn 5½ } 9 Pedicel 3½	4	3½		
Rt.	{ Horn 4½ } 7½ Pedicel 3	2½	3		

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.		
Horn 6	3	6	Ootacamund	Mrs. Reynolds.
Horn 5 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	Allanmyo	Lieut. R. F. White.
Horn 5 $\frac{1}{2}$	2 $\frac{1}{2}$	6	Ootacamund	Mrs. Reynolds.
Horn 5 $\frac{1}{2}$	3 $\frac{1}{2}$	2 $\frac{5}{8}$	Nilgiris	N. L. Sheldon.
5 $\frac{3}{8}$	3 $\frac{1}{2}$	2 $\frac{5}{8}$	Vizagapatam	H. Tyler.
5 $\frac{1}{2}$	3 $\frac{1}{2}$	2 $\frac{1}{2}$	Nilgiris	N. L. Sheldon.
5 $\frac{1}{2}$	3 $\frac{1}{2}$	..	S. Madras	Capt. H. R. Milvain.
Horn 5 $\frac{1}{2}$	4 $\frac{1}{2}$	3 $\frac{3}{4}$	Yamethin, Burma	R. B. Hutchins.
Horn 4 ft.)	4 $\frac{1}{2}$	4 $\frac{1}{2}$	Kumaon	Lieut.-Col. G. E. Nichol.
Horn 5	2 $\frac{1}{2}$	2 $\frac{3}{4}$	Nepal Terai	Ditto.
Horn 4	3 $\frac{1}{2}$	4 $\frac{1}{2}$	S. Madras	Capt. S. H. Churritington.
Horn 3 $\frac{1}{2}$	3 $\frac{1}{2}$	4 $\frac{1}{2}$	Garhwal ..	Capt. G. F. Evans. (<i>Points</i> 3 x 2.)

THE KASHMIR STAG OR HUNGAL.

Cervus cashmirianus or *Cervus wallichii*—Indian names : *Hungal*, *Majamas*, Kashmir. Often called *Barasingha* by natives and uninformed Europeans.

Habitat.—The Kashmir Valley between 9,000 and 12,000 feet in summer, lower in winter ; also in parts of Chamba adjoining Kashmir.

Period of gestation.—Six months ; the young are born in April.

Description.—Brown to dark liver colour ; whitish caudal disc ; sides and limbs paler ; lips, chin, ears whitish. Fawns spotted till the third or fourth year. The horns have brow, bez and trez and royal tines. Adults usually carry five points. Males generally solitary. Small heads in summer, larger in winter. Horns shed in March ; new horns not perfect till October. They roam from forest to forest, prefer grassy glades and love water.

Measurements.—Average height at shoulder, 48 inches ; length from nose to tail, 7 feet ; tail, 5 inches. Average horns, 40 inches ; $5\frac{1}{2}$ inches girth at mid beam. Average weight, 450 lb.

Record heads.—There is very fine head in the Bombay Natural History Society's Museum, the measurements of which are as follow :—Length, 47 inches ; circumference, $7\frac{5}{8}$ inches ; tip to tip, 21 inches ; spread, 36 inches ; points 12. Sterndale gives details of one of 47 inches by $7\frac{3}{4}$ inches girth. Col. A. E. Ward sends me details (see below) of a 49-inch head, which I believe to be the record. He also gave me details some years ago of a 47-inch and a 45-inch head shot by him

in the Sind Valley. Large heads, that is to say, anything over 44 inches, are not easy to get nowadays.

Length.	Girth.	Tip to tip.	Spread.	Points.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.			
49	8	50	..	12	Sind Valley	Col. A. E. Ward.
48	7 $\frac{3}{4}$	..	..	..	Ditto	Ditto.
47	7 $\frac{3}{4}$	66	..	12	Ditto	Ditto.
47 $\frac{1}{2}$	6	22	39	12	Kashmir	P. B. Vander Byl.
46 $\frac{1}{2}$ rt.)	..	..	50 $\frac{1}{4}$	..	Ditto	Etherington Smith.
44 $\frac{1}{2}$ lft.)	8	..	..	..	.....
46	..	..	..	12	.....
41	6 $\frac{1}{2}$	..	..	12	.....
40 $\frac{1}{2}$	..	..	..	10	Kashmir	Capt. S. B. Paterson.
40	6	..	..	..	Ditto	Indian Museum.
39 $\frac{1}{2}$	5 $\frac{3}{4}$	22	39 $\frac{1}{4}$	5+5	Ditto	Officers' Mess, 37th Dogras.
38 $\frac{1}{2}$	6 $\frac{3}{4}$	19	36 $\frac{3}{4}$	5+5	Ditto	Capt. G. H. Davis.
38 $\frac{1}{2}$	5	29	32	5+5	Ditto	Officers' Mess, 3rd Gurkhas.
38 $\frac{1}{2}$	5 $\frac{3}{4}$	21 $\frac{3}{4}$	..	10	Ditto	Ditto.
37 $\frac{3}{4}$	5 $\frac{1}{4}$	19 $\frac{1}{4}$	..	12	Ditto	Lieut.-Col. C. E. Nichol.
36	6	32 $\frac{1}{2}$	..	5+5	Ditto	Capt. J. A. S. Balmain.
						Ditto.
						Capt. G. P. Evans.

THE BARASINGHA OR SWAMP DEER.

Cervus duvauceli.—Indian names : *Barasingha*, Hind. ; *Baraya*, Nepal ; *Maha*, Himalayan Terai ; *Maha goinjak* (male), *Gaoni* (female), Central India ; *Bheelwah*, Assam. (*N.B.*—Not to be mistaken for the Hungal or Kashmir Stag.)

Habitat.—Along the base of the Himalayas, throughout Assam and the Sundarbans, Sind, Nerbudda Valley and Central Provinces.

Description.—Yellow brown above, paler below in summer, rufous brown in winter, throat, belly and inside thighs whitish, white caudal patch. Young spotted. Hair fine and woolly ; neck maned, tail moderate, and face long. Horns smooth, the brow tine nearly at right angles to the beam, with occasional small points ; beam unbranched for more than half its length when it divides and branches into five points.

It prefers undulating grass land on the skirts of woods. It is highly gregarious ; the horns are shed in January or February. It feeds chiefly on grass ; it is semi-nocturnal and loves to wallow. Flesh excellent.

Measurements.—Average height at shoulder, 45 inches ; length, 6 feet ; tail, 8 inches ; weight from 450 lb. upwards. Average horn measurements, 30 inches round curve and 5 inches at mid beam.

Record heads.—Three heads of 41 inches have been got in the Central Provinces : Mr. J. D. Inverarity shot barasingha that carried 38, 37 and 36-inch heads ; Col. A. E. Ward tells me of one that he measured $36\frac{1}{2}$ inches, from Nepal. The late Mr. H. R. P. Carter ("Smoothbore") published in 1884 details of a fine head, 38 inches long by 9 inches in girth. The Indian Museum specimen from Sirguja in the Chota Nagpur District, presented by Mr. J. Cockburn is $35\frac{1}{2}$ inches, and 20 inches from the burr to the bifurcation of the beam—a good head. Swamp deer frequently exhibit a large number of points : the late H. B. Simson ("Judex") tells us of one with no less than twenty and Baker saw one with 16 points.

Length.	Girth.	Tip to tip.	Spread.	Points.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.			
38	$5\frac{1}{2}$	34	$37\frac{1}{8}$	6+5	Assam	.. J. McTaggart.
$36\frac{1}{2}$	..	..	..	15	U. P.	.. Lieut. P. Shephard.
36	$7\frac{1}{2}$	$34\frac{1}{2}$	..	8+6	Ditto	.. J. C. Faunthorpe.
$35\frac{1}{4}$	..	38	$40\frac{3}{4}$	..	Ditto	.. Lieut. C. Shepherd, 53rd Sikhs.
$35\frac{1}{2}$	7	$35\frac{1}{2}$	..	7+5	Ditto	.. J. C. Faunthorpe.
$34\frac{1}{2}$	$6\frac{1}{2}$	..	33	7+7	Ditto	.. Ditto.
34	$7\frac{1}{2}$	$38\frac{1}{2}$	..	5+5	Ditto	.. Ditto.

Length.	Girth.	Tip to tip.	Spread.	Points.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.			
34	5 $\frac{1}{8}$	34 $\frac{1}{8}$	33 $\frac{1}{8}$	5+5	Mandla, U. P. ..	R. D. T. Alexander.
33 $\frac{1}{2}$	4 $\frac{3}{4}$	32 $\frac{1}{2}$	33	5+5	Philibit ..	Lieut.-Col. C. E. Nichol.
33	..	..	..	12	U. P. ..	Lieut. P. Shepherd.
32 $\frac{1}{2}$	5 $\frac{1}{4}$	24 $\frac{1}{2}$	29 $\frac{1}{2}$	4+3	Philibit ..	Lieut. Sir Thomas Roberts, Bart.
32	6	28	..	7+5	Assam ..	Lieut. L. P. Haviland.
27	4 $\frac{3}{4}$	24 $\frac{1}{4}$	26 $\frac{1}{2}$	8+8	Philibit ..	Lieut. Sir Thomas Roberts, Bart.

THE THAMIN OR BROW-ANTLERED DEER.

Cervus eldi.—Indian names : *Sangnai*, Manipur ; *Thameng* or *Thamin*, Burma.

Habitat.—Manipur, southwards throughout Burma.

Description.—Of moderate size, very coarse hair, extra thick about the neck, tail short. Long narrow head. Extremely long curved brow antler, joining the beam in a continuous curve at right angles to the burr. There is generally a snag

in the axis and small points on the upper surface of the brow tine ; the beam branches after a considerable distance ; then curves backwards, outwards, and lastly forwards. In winter, the males are almost black, in summer fawn-coloured, does lighter ; lower parts are from pale-brown to white according to season, no caudal disc. Young spotted.

They inhabit grassy and swampy plains, in herds from ten to fifty, are sometimes found on the fringe of forest, but usually keep to the open plain. They are fond of wallowing. In Manipur, the horns are shed in June, in Burma about September ; males acquiring horns in their second year are in their prime at seven years old.

Measurements.—Average height at shoulder, 45 inches ; does, 42 inches ; average horn measurements, from tip of brow antler to end of horn, 36 inches. Average weight of males, 220 lb. ; females, 160 lb.

Record heads.—The British Museum specimen is $38\frac{3}{4}$ inches, but several larger heads up to 42 inches have been shot in Burma and Siam. The Indian Museum head, which comes from Manipur and was presented by Dr. McClelland so far back as 1844, measures $33\frac{3}{4}$ inches from burr to tip and $51\frac{1}{2}$ inches from tip of brow antler to tip of beam. A $38\frac{1}{4}$ -inch specimen was measured by "Young Nimrod" in 1881 and recorded in an Indian journal of that year.

Length.	Girth.	Tip to tip.	Brow tine.	Spread.	Points.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.	Inches.			
41 rt. 39½ lft.	5½ 5½	.. ..	16 15½	57 55½	3 4	Mahlaing, Meiktila Dist.	{ Lieut. Rodriguez. (Picked up.) Spread tip to tip head antler 16½ inches, wid- est spread head antler 32 inches.
40½ 39½	5½ 6½	28½ 28¾	16½ 13½	.. 34½	5+4 7+8	Magwo .. U. Burma ..	Capt. F. M. Browne. R. D. T. Alexander.
40½ lft. } 38½ rt. }	6 6	.. ..	{ 16½ } { 17½ }	27	{ 3 } { 4 }	Magwo ..	Capt. F. M. Browne.
40	6½	..	16½	25	3+4	Thayetmyo ..	J. P. Cool.
40½	6	15½	17	28	6+5	Shwebo ..	Lieut. J. Gurdon.
39½	5½	16½	..	24½	12	Allanmyo ..	Lieut. E. V. Wills.
38½	8½	..	..	..	..	Nimar, C. P. ..	Capt. W. A. Whitehead. 3/1st Punjab Regt.
38½	5½	21	13	30	5+5	Shwebo ..	Lieut. J. Gurdon.
38½	7½	..	18	32	3+3	Thayetmyo ..	J. P. Cool.

Length.	Girth.	Tip to tip.	Brow thie.	Spread.	Points.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.	Inches.			
38	6	28	18 $\frac{1}{2}$	26 $\frac{1}{2}$	2+3	Thayetmyo	J. P. Cool.
38	6 $\frac{1}{2}$	28	..	33	9	Alhnamyo	Lieut. R. F. White.
38	5	27 $\frac{1}{2}$	13 $\frac{1}{2}$	34	..	.....	P. S. H. (<i>Asian</i> .)
37 $\frac{1}{2}$	5 $\frac{1}{2}$	27 $\frac{1}{2}$	15	..	5+4	Magwe	Capt. F. M. Browne.
37 $\frac{1}{2}$	5	21 $\frac{1}{2}$	..	30 $\frac{1}{2}$	4+4	Ditto	Ditto.
37	6	22 $\frac{1}{2}$	15 $\frac{1}{2}$	33 $\frac{1}{2}$	9	Allanmyo	Lieut. A. St. J. Wright.
37	5	27 $\frac{1}{2}$	14 $\frac{1}{2}$	33 $\frac{1}{2}$	3+3	U. Burma	Capt. G. P. Evans.
37	5	20 $\frac{1}{2}$	..	28 $\frac{1}{2}$	4+3	Ditto	Ditto.
36 $\frac{1}{2}$	4 $\frac{1}{2}$	20 $\frac{1}{2}$	15 $\frac{1}{2}$	32 $\frac{1}{2}$	..	Ditto	Lieut. C. Elliott.
36 $\frac{1}{2}$ rt. 34 lft.	7	9	{ 15 $\frac{1}{2}$ }	27	6	Saening Dist., Burma.	R. B. Hutchins.
36 $\frac{1}{2}$	5 $\frac{1}{2}$	24 $\frac{1}{2}$	..	32 $\frac{1}{2}$	0+7	U. Burma	Capt. G. H. Davis.
36	4 $\frac{1}{2}$	29 $\frac{1}{2}$	18 $\frac{1}{2}$	31 $\frac{1}{2}$	4+3	Manipur	Lieut. L. P. Haviland.
36	5 $\frac{1}{2}$	..	19 $\frac{1}{2}$	24	5+5	Thayetmyo	J. P. Cool.
36	5 $\frac{1}{2}$	16 $\frac{1}{2}$	..	24 $\frac{1}{2}$	12	Allanmyo	Lieut. A. St. J. Wright.
35 $\frac{1}{2}$	5 $\frac{1}{2}$	18 $\frac{1}{2}$	15 $\frac{1}{2}$	28	6+5	U. Burma	Capt. G. P. Evans.

Length.	Girth.	Tip to tip.	Brow line.	Spread.	Points.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.	Inches.			
35 $\frac{1}{2}$	5 $\frac{1}{4}$	29	..	35 $\frac{1}{2}$	6+5	U. Burma	Capt. G. H. Davis.
35	7 $\frac{1}{4}$	16 $\frac{1}{2}$	23	26	7+6	Shwabo	R. B. Hutchins.
35 1ft.	7 $\frac{1}{4}$ }	21	23 }	26 $\frac{1}{2}$	3+4	U. Burma	Capt. G. P. Evans.
34 $\frac{1}{2}$	6	26 $\frac{1}{2}$	17 $\frac{1}{2}$	31 $\frac{1}{2}$	11	Allamayo	Lieut. A. St. J. Wright.
34 $\frac{1}{2}$	5 $\frac{1}{2}$	16	15	..	5+3	Magwe	Capt. F. M. Browne.
34 $\frac{1}{2}$	5	16	14 $\frac{1}{2}$	..	3+2	Ditto	Ditto.
34	5 $\frac{1}{2}$	16	13	25	8+6	U. Burma	Capt. G. P. Evans.
34	..	..	15 $\frac{1}{2}$	..	..	Magwe	Maj. C. M. Preslley.
34	6 $\frac{1}{2}$	18 $\frac{1}{2}$	14 $\frac{1}{2}$	27 $\frac{3}{4}$	..	Taungdwingyi,	Capt. J. E. Colenso.
						U. Burma.	
33 $\frac{1}{2}$	7	26	10 $\frac{1}{2}$	29	3+2	Ditto	Ditto.
33	6	23	13	32	2+2	Ditto	Ditto.
32 $\frac{3}{4}$	5	16 $\frac{3}{4}$	10 $\frac{1}{4}$	23 $\frac{1}{4}$	3+3	Manipur	Lieut. L. P. Haviland.
30	6		13				
29	6	19 $\frac{1}{2}$	13	27	6+5	Shwabo	R. B. Hutchins.

THE SAMBUR OR RUSA DEER.

Cervus unicolor, *Rusa aristotilis*.—Indian names: *Sambar*, Hindl.; *Jarao*, Nepal; *Maha*, Terai; *Meru*, Mahr.; *Ma-uo*, Gond; *Dhalnar*, Kurku; *Kadumai*, Tam.; *Gous*, Eastern Bengal; *Kha-khowa-pohu*, Assam; *T'shat*, Burma; *Kadvi*, Canara.

Habitat.—Throughout the Indian Peninsula (except the Punjab) from 10,000 feet to sea-level; common on alluvial flats, undulating or hilly ground with forest.

Period of gestation.—Eight months; one at a birth.

Description.—The largest Indian deer. Hair coarse, ears large, mane on neck and throat, tail moderate, horns normally have but three tines. In colour uniform dark brown, chin, lower surfaces, belly, inside thighs yellowish. The young are never spotted.

It is essentially a woodland deer, is not very shy, does not herd largely, is nocturnal in its grazing, feeds on grass, and browses on shoots and leaves and drinks daily. The horns are dropped in March and April, but this is very irregular, stags often retaining their horns for years. Speed moderate; it is usually driven, often stalked and very tenacious of life. It is extremely belligerent, and its flesh is coarse, but well-flavoured.

Measurements.—Average height at shoulder, 54 inches; average horn measurements, 30 inches; length, 6 feet 6 inches. Weight, 500 to 700 lb.

Record heads.—Capt. C. E. Jackson, of the Bhopal Battalion, has kindly sent me details of the record head now in the possession of the Bhopal State and shot by the late Nawab ; they are as follows :—*Left*, 50½ inches long, 9½ inches girth ; *right*, 48 inches long, 9½ inches girth ; tip to tip 24 inches ; points 3 + 3. In the *Bombay Natural History Society's Journal* there is a record of a single horn which measured 44½ inches : this was knocked off by a shot by Mr. R. Gilbert and as this measurement is from the tip of the beam to where it was broken off above the brow line, this head in all probability measured over 48 inches. There is a 45-inch head in the collection of the Bombay Natural History Society, and the number of heads recorded between 44 and 45 inches is large. In the following tables will be found details of a fine 16½-inch head shot by Col. W. H. Salmon.

INDIAN VARIETY.

Length.	Circum.	Tip to tip.	Spread.	Place.	Remarks.
Inches. 50½	Inches. 9½	Inches. 24	Inches. ..	Bhopal ..	Nawab of Bhopal.
ft. 48	ft. 9½	..	..	Satepura Hills	Col. W. H. Salmon. (<i>B. N. H. S. Journal</i> .)
16½	10½	23½	36	..	..
45½	8½	..	38	Tillichpur	Capt. A. L. R. Glasford.

INDIAN VARIETY—(could.).

Length.	Girth.	Tip to tip.	Spread.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.		
45	9 $\frac{3}{4}$	..	40 $\frac{1}{2}$	....	O. Beeby. (Asian.)
45	9	..	40 $\frac{1}{2}$	....	Sterndale's <i>Mammalia</i> .
44 $\frac{1}{2}$	..	..	..	Taptce River, C.P. ..	R. Gilbert. (<i>Horn broken above brow</i> <i>tine. B. N. H. S. Journal.</i>)
44 $\frac{1}{2}$	9	..	42	Harda	J. G. Snares.
44	10	..	38 $\frac{1}{2}$	....	J. D. Inverarity.
44	9 $\frac{3}{4}$	23 $\frac{1}{2}$	35	Narsinghpur	J. H. McNeale.
43 $\frac{1}{2}$ lt. }	8 $\frac{1}{2}$	26 $\frac{1}{2}$	..	....	W. McInroy.
42 $\frac{1}{2}$ rt. }	10	25	34	Narsinghpur, C. P. ..	J. H. McNeale.
43	10	..	..	Coromandel Coast ..	Indian Museum.
43 rt. }	9	16	32 $\frac{1}{2}$	Sutna	A. V. Venables.
41 lt. }	7 $\frac{3}{4}$	25	49	C. P. ..	W. S. Burko. (<i>Indian Field.</i>)
43	11 $\frac{1}{2}$	24 $\frac{1}{2}$	32 $\frac{1}{2}$	Nilgiris ..	E. M. Windle.
42 $\frac{1}{2}$	9 $\frac{1}{2}$	30	37 $\frac{1}{2}$	Itarsi, C. P.	Capt. B. H. Selby.
42 $\frac{1}{2}$	11	..	..	Nilgiris ..	E. Hadfield.
42	10 $\frac{1}{2}$	..	41 $\frac{1}{2}$	....	J. D. Inverarity.
41 $\frac{1}{2}$	11 $\frac{1}{2}$	..	..	Central India	Madras Museum.

INDIAN VARIETY—(contd.).

Length.	Girth.	Tip to tip.	Spread.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches		
41½	9½	21½	37½	Narsapatam, Vizag. Dist	M. E. Anderson.
41	..	..	..	Raipur	E. G. Browne.
41	10	..	30½	Bori	Col. Forsyth.
41	9½	..	40½	....	O. Beeby. (<i>Asian</i> .)
41	8	..	22½	C P	Lieut. F. F. Gillies.
41	..	..	..	Konjola, C. P. ..	J. F. Holmes.
40	9½	..	39	Tehri Garhwal ..	Capt. N. L. Learmouth.
40	9	42½	45½	Asingarh, C. P. ..	Lieut. J. A. Brooke.
40	8	..	39	Nilgiris	"Toda." (<i>Asian</i> .)
40	8	32½	..	Bagra, C. P. ..	W. Wright Neville.
40	6½	32	35½	Khandesh	Capt. G. H. Davis.
40	..	..	..	Raipur	E. G. Browne.
40	..	..	..	Kandagarh, C. P. ..	S. Nazir Husain.
39½	7½	..	39	Chikalda	Capt. A. I. R. Glasford.
39½	7½	27	33½	Siwaliks	Lieut.-Col. C. E. Nichol.
39½	8½	16	..	Kolkaz, Berar ..	Capt. E. A. Jenkins.
38½	9	..	19	....	J. D. Inverarity. |
38½	8½	32	45	....	P. G. Cameron.

INDIAN VARIETY—(concl'd.).

Length.	Girth.	Tip to tip.	Spread.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.		
38½ <i>lt.</i> }	6¾	28½	36	Vizagapatam ..	H. Tyler.
38 <i>rt.</i> }	7½	..	34½	Garhwal ..	A. P. Davis.
38	7½	23	29	Central India ..	Lieut. R. M. Brind.
38	5½	..	..	Kumaon Bhabur ..	A. E. C. Casey, I.C.S.
37½	9¼	25½	..	Kumaon ..	Officers' Mess, 3rd Gurkhas.
37½	8½	..	..	Assam ..	E. C. Stuart Baker, F.R.S.
37½	7	38	41	Pulney Hills, Madura.	E. O. King.
37½ <i>lt.</i> }	9½	..	..	{ Brahmalmgheries.	A. W. Peet.
36½ <i>rt.</i> }	9	..	..	{ S. India.	
37	9	17½	24	Nimar, C. P. ..	Lieut. G. A. Hassells-Yates.
36½	6½	33½	30	Kumaon ..	Lieut.-Col. G. E. Nichol.
35½	9	24½	34½	Narsapatam, Vizag. Dist.	M. E. Anderson.
35	9	32½	..	Mt. Abu ..	Col. L. L. Fenton.
35	7	38	40½	Philibit ..	Lieut. C. T. Shepherd.
34½	8	19	..	Ditto ..	Ditto.
34	5½	..	..	Kumaon Bhabur ..	A. E. C. Casey, I.C.S.
34	5½	..	..	Ditto ..	Ditto.
33½	5½	..	..	Ditto ..	Ditto.
33½	6	32	..	Kathiawar ..	Lieut. C. T. Shepherd.

MALAY VARIETY.

Length.	Girth.	Tip to tip.	Spread.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.		
35½	9½	30	32½	Tigyaing, Katha Dist., U. Burma.	G. W. Allan.
34 rt.	11¾	24¾	31½	N. Chin Hills ..	Havildar Kalu Gurung.
33½ lft.	10½				
33½	..	..	..	Buksa Duar ..	Lieut. W. L. Hogg.
32½	9¼	14	20½	U. Chindwin, U. Burma.	E. H. Readnell.
32	..	..	..	Buksa Duar ..	Lieut. W. L. Hogg.
31½	..	..	..	Ditto ..	Ditto.
30	..	..	..	Ditto ..	Ditto.
30	8¾	30¼	31	Gangaw, U. Burma..	Capt. J. E. Colenso.
27½	5¾	26	26	U. Burma ..	Lieut. C. Elliot.
25	8¼	18	22	Nepal Terai ..	R. M. Woods.

THE SPOTTED DEER OR CHITUL.

Cervus aris.—Indian names: *Chital* (stag, *Jhank*, hind, *Chital*); *Chatidah*, Bhagalpore; *Boro khotiya*, Beng.; *Lupi*, Gond.; *Sarung*, *Jate*, Can.; *Dupi*, Tel.; *Paliman*, Tam.; *Chital*, Kurku; *Pasu*, Kathiawar; *Sargar*, Canara.

Habitat.—Throughout India, from the lower spurs of the Himalayas extending from the Sutlej to Nepal and southwards. It is not found in Sind, the Punjab plains and Assam; is common in the Sundarbans and throughout Orissa, Central India and Mysore.

Period of gestation.—Eight months.

Description.—Size moderate; no mane; long pointed tail; horns normally with three tines, a brow antler and two upper tines, of which the outer is always the longer. In colour rufous fawn, spotted throughout with white, a dark stripe down the back, bordered by a row of white spots; chin, throat, belly inside of limbs and underneath tail white. Face dark brown; head brownish and unspotted.

It haunts bushes, trees and bamboo jungle on hilly ground and alluvial plains and never ranges far from water. It is gregarious at all times of the year, feeds morning and evening as a rule, drinks between 8 and 10 a.m., grazes and browses, swims well. Fawns are born almost throughout the year, and there is the greatest irregularity in the shedding of the horns, though they are mostly shed between October and March.

Measurements.—Average height at shoulder, 32 inches; average horn measurements, 30 inches; circumference of beam, $3\frac{1}{2}$ inches; length, 4 feet 6 inches. Weight from 200 to 250 lb.

Record heads.—The largest head of which I have any particulars measured $39\frac{1}{4}$ inches, 25 inches tip to tip, with a girth of $5\frac{1}{4}$ inches. It was shot by Lady Eileen Elliot in the Mohand Jungle near Dehra Dun. Two of 39 inches are next best : one shot by Captain F. Pope, of the Northamptonshire Regiment, near Jubbulpore, in January 1907 ; and the other by Maj. W. Radcliffe. Two heads of over 38 inches are also recorded below. Blandford measured one of $38\frac{3}{4}$ inches and several of 38 inches are mentioned by, among others, Forsyth, the late A. M. Markham ("Rohilla") and the Maharajah of Pertabgarh. Horns of over 35 inches are not often got now, but 34 inches is considered a good head. A specimen in the collection of the Bombay Natural History Society measures 35 inches by $4\frac{3}{4}$ inches in girth ; the best in the Indian Museum (Calcutta) is $34\frac{3}{4}$ inches, shot in the Mirzapore District by Mr. Cockburn. The British Museum has a 36-inch head.

Length.	Girth.	Tip to tip.	Spread.	Points.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.			
$39\frac{1}{4}$	$5\frac{1}{4}$	25	..	..	Near Dehra Dun.	Lady Eileen Elliot.
39	$5\frac{1}{4}$	25	..	8	N. India ..	Maj. W. Radcliffe.
39	$4\frac{1}{4}$	$15\frac{1}{4}$	..	5+4	Jubbulpore ..	Capt. F. Pope, North Hants Regt.
$38\frac{1}{2}$	$4\frac{7}{8}$	24	..	9	Eastern Berar ..	A. Higgins.
$38\frac{1}{2}$	..	$25\frac{3}{8}$	$30\frac{1}{2}$	3+3	G. P. ..	Lieut. P. Beaumont.

Length.	Girth.	Tip to tip.	Spread.	Points.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.			
384 384 384	53	20½	26	8 .. ..	.... .... ....	Lieut. R. M. Brind. Maj. Drake-Brockman, 39th Garhwali Mess, Lansdowne.
33	5	20½	..	4+4	Kumaon, Terai	Lieut. G. J. Shepherd, 53rd Sikhs F. F.
38	..	..	..	..	Kumaon	Col. G. J. Clarstin, I.C.S.
38	..	..	..	..	....	Korsyth's <i>Highlands of</i> <i>Central India</i> .
38	4½	32½	24	3+4	(Miterakote	Capt. A. I. R. Glasford.
37½	7½	19½	22½	4	Gharapuran	W. J. Ross.
37½	4½	14	22½	3+3	U. P.	J. G. Faunthorpe.
36½	4	34	27½	..	Moti Nala, Mundla Dist., G. P.	Lieut. J. M. W. O'Rourke.
37½	..	..	..	8	Kumaon	A. E. G. Casey, I.C.S.
37½	..	..	..	9	Ditto	Ditto.
37	4½	24½	30½	5+5	U. P.	J. G. Faunthorpe.
36½	..	19½	..	..	Terai	Officers' Mess, 3rd Gurkhas.
36½	4½	27½	..	..	Eastern Berar	A. Higgins.
36½	5	22	27½	4+4	U. P.	J. G. Faunthorpe.
36½	4½	..	..	..	Kumaon	A. E. G. Casey, I.C.S.
36½	4½	24½	30	5+6	N. Circars	W. H. Pitt.
36½	4	18	25	..	Central India	Lieut. R. M. Brind.

Length.	Girth.	Tip to tip.	Spread.	Points.	Place.	REMARKS.
Inches.	Inches.	Inches.	Inches.			
36 $\frac{1}{2}$	6 $\frac{1}{2}$	26	30 $\frac{1}{2}$	3+4	Mandla	R. D. T. Alexander.
35 $\frac{1}{2}$	5	22	27 $\frac{1}{2}$	3 . 3	Keladonghi	Lieut. Sir T. Roberts, <i>Bat.</i>
35 $\frac{1}{2}$	..	..	..	8	Kumaon	A. E. G. Casey, I.C.S.
35	4 $\frac{1}{2}$	8 $\frac{1}{2}$	16 $\frac{1}{2}$	4+3	U. P.	J. G. Faunthorpe.
..	..	10	..	..	Teptee River	N. G. Macleod.
..	..	..	..	6+7	Naini Tal	E. D. Nuan.
34 $\frac{1}{2}$	4	16	24 $\frac{1}{2}$	4+3	Fatehpur, U. P.	Lieut. Sir T. Roberts, <i>Bat.</i>
34 $\frac{1}{2}$	5 $\frac{1}{2}$	30 $\frac{1}{2}$	33	3+3	U. P.	J. G. Faunthorpe.
34 $\frac{1}{2}$	4 $\frac{1}{2}$	16	21 $\frac{1}{2}$	..	S. Bever	Lieut. B. H. Selby.
34	6	21 $\frac{1}{2}$	26 $\frac{1}{2}$	4+4	Kumaon	Lieut.-Col. G. E. Nichol.
34	4 $\frac{1}{2}$	..	27 $\frac{1}{2}$	5+4	Ditto	Ditto.
33 $\frac{1}{2}$	6 $\frac{1}{2}$	..	..	..	Hoshungabad,	Col. A. E. Ward.
..	4 $\frac{1}{2}$	18 $\frac{1}{2}$	..	..	G. P.	W. Wright Neville.
33	..	..	..	..	Korra, G. P.	Capt. A. Macdavis, 3rd Brn- mans.
..	..	..	..	6+4	S. Madras	Capt. H. R. Milverin.
32	3 $\frac{1}{2}$	22	..	..	N. Canara	Maj. C. M. Priestley.
..	3 $\frac{1}{2}$	21 $\frac{1}{2}$	..	..	S. Madras	Capt. S. H. Charrington.
31 $\frac{1}{2}$	..	..	..	9	Kumaon	A. E. G. Casey, I.C.S.
30 $\frac{1}{2}$	4 $\frac{1}{2}$	20 $\frac{1}{2}$	21 $\frac{1}{2}$	3+3	Kotech	R. D. T. Alexander.
30	..	..	..	..	Kopejola, C. P.	J. F. Holmes.

THE HOG DEER.

Cervus porcinus.—Indian names : *Para*, Hind. ; *Dodar*, Rohilkhund ; *Khar luganu* and *Sugoria*, Nepal ; *Nutrini harin*, Beng. ; *Darai*, Burma.

Habitat.—From Sind and the United Provinces, eastwards to Assam, Sylhet, and as far as Burma.

Period of gestation.—Eight months.

Description.—Of small size with short legs ; small horns on longish pedicles, the brow antler meeting the beam at an acute angle, outer tine exceeding the inner. It is brown in colour with paler lower parts, ears white inside and tail white beneath. The young up to six months are spotted throughout.

It keeps entirely to alluvial plains and abounds in grass and bush jungle. It is not gregarious, is ungainly in its movements, and an awkward runner. The bucks drop their horns in April.

Measurements.—Average height about 24 inches ; length from muzzle to root of tail, 42 inches ; horns, 12 inches. Weight, 90 to 100 lb.

Record heads.—The Bombay Natural History Society has a $20\frac{3}{4}$ -inch specimen and there is an almost equally fine one of $20\frac{1}{2}$ inches in the Indian Museum (Calcutta) shot in Martaban and presented by the late Lieut. R. C. Beavan. "Dee A" gives in the *Asian* (9th June, 1893) the following measurements :—(1) Right horn, 21 inches ; left, $20\frac{3}{4}$ inches ; (2) Right horn, 26 inches ; left,

20 $\frac{3}{8}$ inches. Horns of 18 and 19 inches have often been recorded; anything above 17 inches is regarded as good in these days.

Length.	Girth.	Tip to tip.	Place.	REMARKS.
Inches.	Inches.	Inches.		
24	7	14 $\frac{1}{2}$	Burma	H. Wheldon.
23 $\frac{1}{2}$	7 $\frac{1}{8}$	11 $\frac{1}{4}$	Prome, Burma	Ditto.
21 $\frac{1}{2}$	..	..	Burma	Ditto.
21	..	..	Prome, Burma	Ditto.
21	..	14	Pagu Dist.	G. W. Allen.
20 ft. 1	..	..	Meerut (Kadir)	Lieut. R. V. Pollok. (<i>Spearhead</i> .)
20 $\frac{1}{4}$	6 $\frac{3}{4}$	13 $\frac{1}{4}$	Burma	H. Wheldon.
20	6 $\frac{3}{4}$	..	Prome, Burma	Ditto.
19 $\frac{1}{2}$	..	..	....	Capt. H. S. King, R. E. (<i>Asian</i> .)
19 $\frac{3}{8}$	..	..	Burma	23rd August, 1880.
19 $\frac{1}{4}$	6 $\frac{3}{4}$	14 $\frac{3}{8}$	Burma	H. Wheldon.
19	6	9	Ditto	Ditto.
19	..	..	Prome, Burma	Ditto.
19	..	..	Bahrach, Oudh	Surgn. W. Doane, I.M.S. (<i>Asian</i> ., 23rd August, 1880.)
19	..	..	Meerut (Kadir)	Maj. L. E. Kennard. (<i>Spearhead</i> .)
18 $\frac{1}{2}$	3 $\frac{1}{8}$	..	...	O. H. L. Napier.

Length.	Girth.	Tip to tip.	Place.			REMARKS.
Inches.	Inches.	Inches.				
18½	..	..	Myitkyina	..	..	Maj. C. M. Priestley.
18	4½	13½	U. P.	..	..	J. C. Faunthorpe.
17½	..	9¾	U. Burma	..	..	Capt. G. P. Evans. (11 inches spread.)
17¼	2¾	..	..	..	..	O. H. L. Napier.
17¼	5	13	Assam	..	..	R. E. Scott Erskine.
17¼	5	12	Myitkyina	..	..	W. S. Thom.
17¼	3½	12¾	Meerut (Kadir)	..	..	Capt. S. H. Charrington. (Speared.)
17	..	..	Kumaon	..	..	Maj. N. Woodyatt.
17	..	..	Sind	..	..	Capt. G. H. Davis.
16¼	4¾	9½	Burma	..	..	W. S. Thom.
16	5	12	Ditto	..	..	Ditto.
16	3¾	16	Kumaon	..	..	Lieut.-Col. C. E. Nichol.
15½	..	..	Meerut	..	..	Capt. S. H. Charrington.

THE MUSK DEER.

Moschus moschiferus.—Indian names: *Custura*, *mushknafa*, Hind.; *Rao*, *Roos*, Kashmir; *La*, Tibetan; *Ribio*, Ladak; *Bena*, Garhwal and Kumaon.

Habitat—Throughout the Himalayas.

Period of gestation.—About 160 days ; usually one at birth.

Description.—Hair of peculiar texture—like pith, long, coarse, brittle and wavy. Hind-legs much longer than forelegs, ears large, and tail very small. The canine teeth of the male are abnormally developed, sometimes reaching 3 inches. Of rich dark brown colour with paler lower parts and white inside thighs and on chin and throat: the winter coat is almost white. The musk pod is an abdominal gland containing about an ounce of musk. Flesh excellent and free from any musky flavour.

It is solitary, frequents woody slopes and steep places. It is not shy. Its usual progression is a series of bounds.

Measurements.—Height at shoulder, 20 inches ; at croup, 22 inches ; length, nose to rump, 36 inches. Weight, about 20 lb.

Length of Tusk.	Place.			REMARKS.
Inches.				
4	Danga Gali	..	..	H. H. Chanter.
$3\frac{3}{4}$	Ditto ..	..	..	Ditto.
$3\frac{1}{8}$	Ditto ..	..	..	Ditto.
$3\frac{5}{8}$	Ditto ..	..	..	Ditto.
$3\frac{1}{2}$	Ditto ..	..	..	Ditto.
$3\frac{3}{8}$	Garhwal ..	..	..	Lieut. G. W. Burton.

Length of Tusk.	Place.			REMARKS.
Inches.				
3 $\frac{5}{10}$	Garhwal ..	..	..	Lieut. G. W. Burton.
3 $\frac{1}{4}$	Pader, Kishtwar	..	..	P. F. Hadow.
3	Kumaon ..	..	..	Capt. G. K. Channer.
3	Kashmir ..	..	..	Capt. S. H. Charrington.

THE INDIAN MOUSE DEER OR CHEVROTAIN.

Tragulus memina.—Indian names: *Pisura*, *Pisai*. Hind., mahr.; *Mugi*, Central India; *Turi-mao*, Gond.; *Jitra Harin* Beng.; *Gardwa*, Ooriya; *Kurupandi*, Tel.; *Kurampani*, Tam.

Habitat.—Southern Indian forests up to 2,000 feet. Orissa, Chota Nagpur, the Central Provinces and along the Western Ghats to North of Bombay.

Description.—The upper parts are brown, minutely speckled with yellow; sides spotted with white or buff, the spots elongating into longitudinal bands, lower parts white, three white stripes on the throat.

It never ventures into the open, but keeps among rocks. It breeds at the close of the rains, is timid and easily tamed.

Measurements.—Average height at shoulder, 10 inches; length from nose to root of tail, 18 inches. Weight, 5 to 6 lb.

THE INDIAN WILD BOAR.

Sus cristatus, *S. scrofa* or *S. indicus*.—Indian names: *Scor*, Hindl.; *Dukur*, Mahr., Guzerat, Sind; *Hikh*, Baluch.; *Pudli*, Gondl.; *Katupani*, Tam.; *Hundi mikka*, Can.; *Sukeram*, Mal.; *Banel*, Nepal; *Ok*, Manipur; *Tauwet*, Burma.

Habitat.—Throughout India and Burma.

Period of gestation.—Four months; 4 to 6 at a litter. The colour is black mixed with rusty brown or grey, old boars greyish; the young are light brown with longitudinal dark brown stripes. A crest along the back, bristles above, coarse hair below, and a tuft of bristles on the rump; tail extending nearly to hocks, body very scantily haired.

It infests high grass and crops, associates in "sounders," feeds morning and evening, wallows much, is partial to marsh, roots continuously, and is extremely destructive to crops. It will also devour carrion, fish and most filth. Its speed is considerable over a short distance. It is the most courageous of all animals and will fight to the death, yet seldom attacks without provocation. It frequently builds mound-like shelters of grass in which it leaves the young, and it is the most prolific of the Ungulata.

Measurements.—Average height at shoulder, 31 inches; average length of tusk, 7 inches; length from nose to vent, 5 feet. Weight from 200 to 300 lb. The

biggest boar on record is that shot on the 25th November, 1907, at Khummoo (Kashmir) by Gen. Rajah Sir Amar Singh: here are its measurements and weight:—Height at shoulder, 39 inches; length from nose to vent, 68 inches; girth, 61 inches; circumference of collar, 50 inches; tusches, $5\frac{1}{2}$ inches; weight, 700 lb.

In January 1907, Mr. Macneil Ferguson, of Berhampore, in Bengal, killed a very lean, lanky boar that weighed 278 lb. and stood just 39 inches at the shoulder. Maj. Priestley's boar, mentioned further on, runs this close in height and weighs a good many pounds more. But these pale into insignificance beside Sir Amar Singh's monster.

I take the following list of weights and measurements from "Raoul's" *Reminiscences of Pigsticking*:—

Height.	Length.	Girth.	Weight in lb.
Inches.	Inches.	Inches.	
$37\frac{1}{2}$	61	51	213
37	62	47	196
36	58	42	162
35	60	44	159
35	60	43	185
34	57	42	160

“Chicago,” writing to the *Asian* (11th October, 1898) gave the following details of a few boars killed on the Brahmaputra Churs:—

No. of Pigs.	Date of killing.	MEASUREMENTS.			
		Height.	Length.	Girth.	Weight in lb.
		Inches.	Inches.	Inches.	
3	Dec. 24th	33½	..	..	..
6	„ 29th	34	..	..	..
8	Jany. 23rd	33½	..	..	..
13	Foby. 20th	31	53½	..	220
14	„ 27th	31	54½	43½	218
16	March 3rd	31½	59	45½	228
18	„ 3rd	32½	59	44	240

I am indebted to Capt. S. H. Charrington for the following details:—

Height.	Weight in lb.	Tush measurement.	Locality.	REMARKS.
Inches.		Inches.		
34	..	.. ..	Muttra Tent Club ..	Maj. P. Hambro.
33	240	.. ..	Ditto ..	Col. W. E. Peyton.
34	300	.. ..	Meerut Tent Club ..	Capt. L. A. Smith.
34	260	.. ..	Ditto ..	Capt. Jones.
34	230	.. ..	Ditto ..	Maj. S. D. Browne.
31	251	.. ..	Ditto ..	Capt. A. E. Wardrop.
..	..	12 } ..	Ditto ..	Capt. S. H. Charrington.
..	..	7 $\frac{1}{2}$ ' ..	Ditto ..	Lient. A. F. Brooke.
..	..	10 $\frac{5}{8}$..	Ditto ..	Lient. A. F. Brooke.
..	..	9 $\frac{1}{4}$ rt. } ..	Teraï	R. M. Woods.
..	..	9 $\frac{1}{8}$ lft. }	.. ..	.. ..
..	..	8 $\frac{3}{4}$..	Meerut Tent Club ..	Capt. Stewart.

The record tush is 14 $\frac{3}{4}$ inches on the authority of the late Mr. H. P. R. Carter ("Smoothbore") who published details of it in the *Field* of 19th January, 1895. It was malformed and had grown almost into a circle. "Raoul" showed me a similar tush some years ago which must have been about 11 inches. Capt. F. R. Forbes, Royal Irish Regiment, Indore, has recorded a tush of 12 inches. There is in the

possession of the Bombay Natural History Society a tush of over 10 inches, and I remember many years ago seeing two tushes of 10 inches which originally belonged to that mighty Danish hog-hunter, Reyling, whose pigsticking fame spread throughout Dinajpore, Rangpore and the surrounding districts in the sixties. Maj. C. Priestley speared at Nagpur a magnificent boar with 9-inch tushes, 38 inches at shoulder, 60 inches girth, 66 inches length and which scaled 350 lb. Mr. W. St. George Ashe got a very fine boar at Moran, Upper Assam, measuring 38 inches at shoulder, 58 inches girth, 65 inches length and scaling 316 lb., with tushes $7\frac{1}{4}$ inches; Maj. P. Lea Birch, R. A., gives 9 inches and $8\frac{1}{2}$ inches got at Ooty, as his best; Capt. S. H. Charrington, Meerut, records a tush of $8\frac{7}{8}$ inches; Capt. A. I. R. Glasfurd gives 9 inches as his best; Mr. C. B. Moggridge's two best Upper Burma specimens had $9\frac{1}{4}$ -inch tushes, and his next best was $8\frac{3}{4}$ inches, and Lieut. W. L. Hogg writes from Cawnpore of a $7\frac{3}{4}$ -inch specimen in his possession. Mr. J. F. Holmes obtained a $7\frac{3}{4}$ -inch tush in Roomal, C. P., while the following are the measurements of a boar got by Mr. W. H. Pitt in the N. Circars: length, 60 inches; girth, 44 inches; height, $35\frac{1}{2}$ inches; tushes, $7\frac{1}{2}$ inches.

THE PIGMY HOG.

Sus sibiricus.—Indian names: *Sano hanel*, Nepal; *Chota soor*, Hindl.
Habitat.—Nepal, Sikkim and Bhutan.

Description.—In colour, shape and habits, this animal is very similar to the Indian wild boar. It is rarely seen and only leaves the forests at night.

Measurements.—Average height, 11 inches; length from snout to vent, 26 inches. Weight, 17 lb.

THE COMMON INDIAN HARE.

Lepus ruficaudatus or *Lepus timidus*—Indian names: *Khargosh*, Hind.; *Kharag*, Beng.; *Morlol*, Gond.; *Koalee*, Kurku; *Kaulhai*, Santal.

Habitat.—From the foot of the Himalayas to the Godavery, the Deccan, Assam and Bengal.

Description.—Light brown mixed with black on back and face; breast and limbs rufous; chin, throat and lower parts white; tail rufous brown above, white below; ears very thinly clad and bordered with black near the tips.

It is found in waste lands and dry cultivation among grass and bushes. It is usually shot and occasionally coursed, and when pursued often seeks shelter in foxes' holes or other burrows.

Measurements.—Head and body, 18 to 20 inches; tail, 4 inches; weight, 4 to 5 lb.; males are smaller than females.

THE BLACK-NECKED HARE.

Lepus nigricolis.—Indian names same as for common hare.

Habitat.—South of the Godavery and the Nilgherries.

Description.—Colour above, brown and black mixed, except a dark or black patch from the ears to the shoulders. Brown tail with black tip; under parts white; ears thinly clad.

Its habits and haunts are the same as those of the common Indian hare.

THE SIND HARE.

Lepus dayanus.—Indian names: *Sassa*, *Seher*, Sind.

Habitat.—Sind and Cutch, the Indian desert and the Dehrajat of the Punjab.

Description.—Greyish brown above, breast and limbs pale reddish; lower parts white. Tail blackish brown. Face stripes whitish, around eyes white, ears thinly clad, fur very soft. Habits and haunts similar to those of the common hare from which it is chiefly distinguished by its soft fur.

Measurements.—Head and body, 17 inches; tail, 4 inches.

THE BURMESE HARE.

Lepus peguensis.—Indian names: *Yun*, *Phu-young*, Burma.

It is found throughout Burma, and in colouration much resembles the Indian hare, but is distinguished by a large dark terminal patch on the posterior surface of each ear. It measures 21 inches; tail, 4 inches.

THE HISPID HARE.

Lepus hispidus.—Indian names same as for the common hare.

Habitat.—The foot of the Himalayas, from Gorakhpur to Assam, Rajmahal, Dacca and Tipperah.

Description.—Ears very short (shorter than the skull), eyes small, fur coarse, hind-legs short, teeth and claws large, colour dark brown above, dirty white below. Breast darker than abdomen. Little is known of its habits; it frequents long grass, bamboos, etc., is not gregarious and is said to burrow. It feeds on roots and the bark of trees.

THE CROCODILE.

Indian crocodiles are represented by two genera—the *gavialis*, which has an extremely long snout, carrying 27 teeth on each side of the upper jaw, and *crocodilus*, which has a moderately long and snub snout with from 17 to 19 teeth on each side of the upper jaw. There are no alligators in India.

Gavialis gangeticus.—Indian name, *Gharial*, and erroneously styled the “fish alligator.” Reaches 25 feet in length and feeds usually on fish. It is dark olive in colour, the young being paler and spotted with brown. The nuchal and dorsal scutes are composed of 21 or 22 transverse series and form a continuous shield. The fingers are webbed, and there is a crest on the outer edge of the forearm, leg and foot. The snout is usually four times as long as the breadth of the skull at the base. It infests the Indus, Ganges, and Brahmaputra, and most of the big streams in Eastern Bengal, Orissa, and Arrakan.

Crocodilus porosus.—The Mugger.—The snout is about twice as long as the breadth at the base of the skull. Four large nuchal scutes with smaller ones on each side; the dorsal shield forms sixteen or seventeen transverse and usually six longitudinal series. Scales on sides and limbs fairly smooth. Fingers and toes partially webbed with a serrated fringe on the outer edge of the leg. The adult is dark olive above, pale below; the young are paler and spotted. It inhabits the rivers of Bengal, the East Coast of India and Burma, enters salt water, and is

frequently seen at sea. It feeds on human beings, animals, fish and carrion, and often exceeds 30 feet in length, and has 17 to 19 upper teeth on each side.

Crocodilus pebustris, also the Mugger.—Its habitat is practically the same as that of *C. porosus*, and its general form, arrangement of scales and colour are very similar, but it can easily be distinguished from *porosus* by its shorter snout and by having *five* teeth on each pre-maxillary bone, while the latter has but *four*.

Crocodiles are by no means wary and permit a close approach. They feed chiefly at night and bask in the day.

If well placed a single shot bags them ; but the brain of a crocodile is very small ; and unless the bullet penetrates it or breaks the neck, it frequently, though mortally wounded, dives and may not be recovered for 24 hours. A .450 Express is the best weapon, and a hollow bullet with a solid base gives the greatest shock effect.

THE GAME DESTROYERS.

With the marked decrease in game in several parts of India which has led to the adoption of active measures for preservation in several large areas, and with the ever-increasing efficiency in firearms, the increase in Indian professional shikaris, and the extension of cultivation, it has become urgently necessary for sportsmen to

turn their attention to the game destroyers of India. It is not suggested that a war of extermination should be waged against every species, but it is hoped that sportsmen will take such steps—chiefly by shooting at sight the natural foes of Indian game—as will tend towards the restoration of that balance of nature which the above and other causes have so seriously disturbed. Opinions may differ as to what may be properly considered “vermin,” the question being largely influenced by the sort of game a sportsman chiefly pursues; but as the matter cannot be discussed in a compilation of this kind, it has been considered sufficient to give a list of the chief game destroyers and leave them to be dealt with at the discretion of the sportsman.

The Leopard is one of the greatest foes to the preservation of deer which, largely owing to his depredations, have been almost, if not quite, exterminated in many parts of India. In any properly considered scheme for preservation by the establishment of sanctuaries, close seasons, etc., the Leopard must therefore be kept within reasonable numbers; and of all the leopards the Ounce or Snow Leopard (*Felis uncia*) is the most inveterate and successful destroyer of the game to be found in the higher elevations of the Himalayas.

The Smaller Cats.—There can be no doubt as to the propriety of classing all the smaller *Felidæ* as vermin in every sense of the term, and in this category are included all the cats mentioned earlier in this book.

Wolves and Wild Dogs.—These destroy an immense quantity of game, and of all the pests which operate against successful big game shooting, there is none greater than the Wild Dog which should be destroyed remorselessly whenever and wherever seen. The Lynx and the Jackal are included under this head.

Civets and Mongooses.—The viverridæ destroy large quantities of feathered game.

Martins and Weasels are active game destroyers.

The Crow.—Both the jungle and urban variety are arrant egg thieves and chick destroyers.

The Owls of almost every variety are ditto, differing.

The Eagles, Buzzards and Falcons are usually deserving of a cartridge, for they prey largely on birds and pigeons; though we must not forget that their partiality for rats, snakes and other small and noxious animals is a recommendation to mercy which should carry some weight.

It has not been considered necessary to give detailed descriptions of these game destroyers, and as a matter of fact most of them are fairly well known to sportsmen: but in our attitude towards them, it is fairly safe to adopt as our guide the Indian saying "*pailla lat, pichi bat,*" and slay first and enquire at leisure—if so inclined.

THE LAND GAME BIRDS.

THE TIBETAN PIN-TAILED SAND GROUSE.

Syrrhaptes tibetanus.—Indian name : *Kuk*, Ladak.

Habitat.—Ladak and the upper portions of the Sutlej Valley.

Description.—Male—front of head white ; sides of head, throat and collar yellow ; the crown, neck, mantle and chest white with black bars. Back, rump and tail-coverts buff with black markings. First ten quills of the wing black, tail buff and chestnut, barred with black and tipped with white. A pale grey band across the breast.

The female is more coarsely barred with black throughout, the grey breast band is wanting, the breast being barred with black. In other respects it resembles the male.

Length, 17 to 19 inches ; wing, 10 inches ; tail, 8 inches.

It is found on barren plains and undulating desert, is shy in the mornings and evenings, but not so in the heat of the day. It drinks morning and evening when it is particularly noisy.

THE EASTERN PIN-TAILED SAND GROUSE.

Pteroclorus alchata.—Indian name : *Ka-at*.

Habitat.—A winter visitor to the Punjab and Sind.

Description.—Male—back and hackles olive buff with yellowish patches ; crown of the head grey, sides bright buff, forehead and neck greyish buff, chin and throat black. A thin black band runs from behind the eye, nearly to the nape. First ten quills of the wing grey ; next quills largely mixed with white. Tail dark grey, tipped with white. Rump and tail-coverts barred black and yellow, belly and sides of body white. The female resembles the male, but has the throat white.

Length, 15 inches ; wing, 8 inches ; tail, 6 inches ; legs, green ; irides, brown ; bill, greenish brown. Weight, 12 oz.

It is shy, very wild and associates in large flocks, feeding on seeds, insects, and leaves.

THE COMMON PIN-TAILED SAND GROUSE.

Pterochlorus exustus.—Indian names : *Bukht titur*, *Kumar titur*, *Kuhar*, Hind. ; *Bootabur*, *Batibun*, Sind ; *Pokundi*, Mahr. ; *Jampalonka*, Tel. ; *Kal Kondari*, Tam.

Habitat.—A permanent resident in Sind, the Punjab, Behar, Chota Nagpur and southwards to Mysore.

Description.—Male—crown and upper plumage fulvous brown ; sides of head, throat and neck ring light buff. First five quills of wing black ; next five black tipped with white. Tail fulvous, with black tips. Chest pinkish buff with a narrow black band, lower breast buff, belly and sides chocolate brown, feathers under tail creamy white.

Female—upper feathers of chest, upper breast fulvous, spotted black. Tail feathers black, barred, and tipped fulvous, ends of middle feathers black. First five quills of the wing black, next five barred with white, belly barred with chocolate brown and fulvous.

Length, 13 inches ; wing, 7 inches ; tail, $5\frac{1}{2}$ inches ; legs, bluish ; irides, brown ; bill, bluish. Weight, 10 oz.

They affect open sandy country with ploughed lands and fallow fields between, are extremely difficult to see on the ground, not particularly wary, occasionally

assemble in thousands, and drink about 4 p.m. Breed throughout the year, laying three eggs in the bare sand. Its call may be rendered by the words *hit me hit me*.

THE SPOTTED PIN-TAILED SAND GROUSE.

Pteroclorus senegallus.—Indian names : *Nundu Katinga Gutu*, Sind.

Habitat.—Common in Sind in winter and less frequent in the Punjab and Rajputana.

Description.—Male—upper plumage brown, tail-coverts yellow, broad grey band on each side of the head meeting behind the crown. Wing quills brown with black shafts, tipped with black. Throat, sides of the head and neck bright yellow. Lower plumage brown with a black patch on the middle of the belly, middle tail feather brown tipped with black : others broadly tipped with white. Feathers under the tail white.

The female resembles the male except that the whole upper plumage, sides of the neck and chest are thickly spotted black.

Length, 13 inches : wing, $7\frac{1}{2}$ inches ; tail, 5 inches ; legs, bluish ; irides, brown ; bill, bluish. Weight, 12 oz.

THE BLACK-BELLIED SAND GROUSE.

Pterocles arenarius.—Indian names: *Bhut titur*, *Bar titur*, *Bakht*, Hind.; *Pauchur*, *Kurmor*, Peshawar; *Katinga*, Sind.

Habitat. A winter visitor, arriving in October and leaving in March; it is found throughout the Punjab, Rajputana, Nepal, the northern portion of Central India, Khandesh, and Guzerat and the western part of the United Provinces.

Description.—Male—upper plumage mixed dark grey and fulvous, with a large patch of fulvous on the wing. Crown of head and neck brownish grey, wing quills dark slaty. Tail feathers fulvous, barred with black and grey and broadly tipped with white. Throat, chestnut ending in a black band; breast grey with a black band across the middle; belly and sides of body black; thighs and feathers under tail white.

Female—closely resembles the male except that the foreneck and upper breast are spotted and the throat yellowish grey.

Length, 14 inches; wing, 9 inches; tail, 4 inches; legs, grey; irides, brown; bill, bluish. Weight, 20 oz.

They are fond of ploughed land and wide, open, sandy plains; they occur in large flocks, sometimes in countless multitudes, feed morning and evening, and take a midday siesta—like all grouse.

THE CORONETTED SAND GROUSE.

Pterocles coronatus.—Indian name: *Katinga*, Sind.

Habitat.—A comparatively rare visitor to Sind.

Description.—Male—sides of forehead black, middle of forehead white, crown cinnamon colour, completely surrounded by a broad coronet of grey; throat, sides of head and neck collar, yellow. Upper plumage brown. Wing quills dark brown, middle tail feathers fulvous, the other feathers fulvous with black bars and white tips. Belly and sides buff, breast tinged with grey, feathers under the tail white. Tail feathers, 16.

Female—every portion of upper plumage fulvous, barred with dark slaty. The entire throat is pale yellow. In other respects it is like the male.

Length, 11 inches; wing, 7 inches; tail, 3 inches. Weight, 8 oz.

THE INDIAN PAINTED SAND GROUSE.

Pterocles fasciatus.—Indian names: *Pahari bhat titur*, *Bhat bun*, United Provinces; *Palki*, Belgaum; *Handeri*, South India; *Sanda palanka*, Tel.; *Butma Ku ku*; *Kakranj*, Goud.

Habitat.—A permanent Indian resident, found chiefly near dry hill or bush-clad uplands and, unlike other grouse, it often affects thick cover.

Description.—Male—black band on forehead with white in front and behind it, black spot over eye, crown buff mottled with black. Sides of head, throat, and neck light buff terminating below in two broad bands of chestnut and yellow. Upper plumage buff, barred with black on the back, rump and tail, with white on the wings which exhibit a large buff patch. Wing quills dark brown. Belly and sides of body barred with equal bands of black and white, feathers under the tail buff barred with black. This bird has a slow, short flight, quite different from the other grouse.

Female—resembles the male except that there is no black band across the forehead, while the lower plumage is barred black and pale fulvous, the black bars being narrower than the fulvous.

Length, $10\frac{1}{2}$ inches; wing, $6\frac{1}{2}$ inches; tail, $3\frac{1}{2}$ inches; legs, yellowish; irides, brown; bill, reddish brown. Weight, $7\frac{1}{2}$ oz. Tail feathers, 16.

THE CLOSE-BARRED SAND GROUSE.

Pterocles lichtensteini.—Indian names unknown.

Habitat.—Has only been found in Sind, west of the Indus. It is very rare.

Description.—Very closely allied to the Painted Sand Grouse, both male and female resembling it in plumage, while its habits are precisely the same. The male, however, has no white in the wing, nor is there a large buff patch without bars. It is

usually found solitary, in pairs, or at most three pairs together. Length, $10\frac{1}{2}$ inches; wing, 7 inches; tail, 3 inches; legs, yellow; irides, brown; bill, brown. Weight, 8 oz. Tail feathers, 14.

THE BUSTARD QUAIL.

Turnix pugnax.—Indian names: *Gulu*, *Gundlu*, Hind.; *Pured* (female), *Koludu* (male) Tel.; *Kurung-kadeh* (female), *Au-kadeh* (male), Tam.; *Kare kaki*, Canarese; *Timok*, Bhutan; *Ngon*, Burmese.

Habitat.—Throughout the Indian Peninsula (except Sind), from Nepal to Travancore, through Burma to Tenasserim.

Description.—Male—upper plumage, rufous barred with black and buff, chin and throat, whitish; lower plumage, buff; foreneck and breast, strongly barred black.

Female—resembles male, but has the whole chin, throat and foreneck black.

Length, $6\frac{1}{2}$ inches; wing, $3\frac{1}{2}$ inches; tail, 1 inch; legs, bluish; irides, whitish; bill, lead colour. Weight, $2\frac{1}{2}$ oz.

It frequents open country and the outskirts of forests, scrub and waste lands. It occurs singly or in pairs. Rises when almost trodden on, disappears into cover after a short flight; useless to try and flush it again. Female has a low note; the male is silent.

THE LITTLE BUTTON QUAIL.

Turnix dussumieri.—Indian names : *Ghimwa-lawa*, *Chota-lawa*, *Dabki*, *Chota batuir* Hind. ; *Libia*, *Purnea* : *Tatu batuiru*, Sind ; *Durwi*, Mahr. ; *China dubba gunduloo*, Tel. : *San gunduloo*, Orissa ; *Ngon*, Burma.

Habitat.—Throughout India.

Description.—Male—upper plumage, pale chestnut, finely barred with black. Wing-coverts spotted chestnut and black. Pale stripe down the crown. Tail feathers margined buff. Throat, whitish ; breast, rufous, speckled brown or blackish, the dark markings on the sides of the breast being heart-shaped. Belly, plain buff. Sexes alike.

Length, 6 inches ; wing, 3 inches ; tail, $1\frac{1}{2}$ inches ; legs, pale slaty ; irides, yellow ; bill, pale slaty. Weight, $1\frac{1}{2}$ oz.

It frequents open grass and scrub country and weedy places.

THE INDIAN BUTTON QUAIL.

Turnix tanki.—Indian names : *Lawa*, Upper India ; *Peddu dubba gunduloo*, Tel.

Habitat.—A permanent resident throughout practically the whole Indian Peninsula.

Description.—Male—crown black, mottled with brown. Upper plumage, greyish brown, mottled black, rufous and buff. Throat, whitish; foreneck and breast, rufous, with black spots at the sides; tail feathers, plain and not margined.

Female—resembles the male, but has a rufous collar.

Length, 6 inches; wing, 3 inches; tail, 1 inch; legs, yellow; irides, white; bill, yellow. Weight, $1\frac{1}{2}$ oz.

BLANFORD'S OR THE BURMESE BUTTON QUAIL.

Turnix blanfordi.—Indian name: *Ngon*, Burma.

Habitat.—Countries east of the Bay of Bengal, southwards to Tenasserim, eastwards to Siam, and it is found on hills and plains.

Description.—Closely resembles the Indian Button Quail; the female has a rufous collar, the male being without.

Length, 7 inches; wing, 4 inches; tail, $1\frac{1}{2}$ inches; legs, yellow; irides, white; bill, brown with yellow near the gape. Weight, $2\frac{3}{4}$ oz.

The commonest Burmese Quail, it affords poor sport, is difficult to flush, flies a little way and can never be put up again.

THE GREY QUAIL.

Coturnix communis.— Indian names : *Batair*, *Bara batair*, *Gagus batair*, Upper India ; *Batairoo*, Sind ; *Buttree*, Bengal ; *Soipol*, Manipur ; *Botah*, Assam ; *Bur ganja*, Poona ; *Burli*, Belgaum ; *Gogri-gellich*, Tel. ; *Peria-kadcb*, Tam. ; *Sepale-haki*, Canarese.

Habitat.—A winter visitor, very common in the north, less so in the south ; it arrives in September and leaves in April. Passes through Himalayas on migration. At Almora many are shot when the crops are cut in spring.

Description.—Male—upper plumage black, grey and rufous mixed, with distinct yellowish streaks. First ten quills of the wing, brown. Throat white, with a black anchor-shaped patch, the flukes of the anchor pointing to the ears. Breast buff with narrow white streaks. Sides, bright buff with black marks and white streaks.

Female—upper plumage resembles that of the male, but the throat is pale buff without any long pointed feathers on the sides of the chin and upper throat. Entire lower plumage, pale buff ; upper breast thickly spotted with black and fine white streaks.

Length, $8\frac{1}{2}$ inches ; wing, $4\frac{1}{4}$ inches ; tail, 2 inches ; legs, flesh colour ; irides, brown ; bill, brown. Weight, $4\frac{1}{4}$ oz.

THE JAPANESE QUAIL.

Coturnix japonica.—Indian name: *Ngon*, Burma.

Habitat.—Burma.

Description.—In colour, markings and size, it resembles the Grey Quail, but it is more richly coloured. In the male, the whole throat and sides of the head are brick-red without any black bands; in the female, the throat is plain buff. This is just an Eastern race of the grey quail, and many people do not consider it a separate species.

THE BLACK-BREASTED OR RAIN QUAIL.

Coturnix coromandelica.—Indian names, same as for the Grey Quail.

Habitat.—Widely distributed throughout India, Assam, Pegu and Burma.

Description.—Male—upper plumage, wings and tail mixed black, brown, grey and rufous with distinct yellow streaks. First ten wing quills plain brown, on both webs. Crown blackish, mottled with brown, yellow band down centre; cream-coloured band over each eye; chin and throat black. A white and then a black gorget succeed this. Sides of the neck russet brown; breast, black; belly, pale buff.

Female—very similar to female of Grey Quail, its chief distinction being the pale brown colour of the outer web of the first ten wing quills.

Length, 7 inches; wing, $3\frac{1}{2}$ inches; tail, $1\frac{1}{2}$ inches; legs, pink; irides, brown; bill, bluish green. Weight, 3 oz.

It is invariably found in open grass and cultivation; it avoids forests, heavy rain and flooded country. It is found in Punjab, United Provinces, Sind, Bengal and Burma in the rains. It is not shy and is found singly or in pairs.

THE BLUE-BREASTED QUAIL.

Excalfactoria chinensis.—Indian names: *Kaneki*, Nepal; *Burli*, Mahr.; *Ngon*, Burma.

Habitat.—A rare bird, but more common in Lower Bengal and Burma.

Description.—Male—it is easily distinguished from other quails by its blue breast and sides, and bright-chestnut belly.

Female—the sides of the body and breast are buff with brown bars, and the belly is pale buff without marks.

Length, 6 inches; wing, $2\frac{3}{4}$ inches; tail, 1 inch; legs, yellow; irides, red; bill, bluish black. Weight about 2 oz.

THE PAINTED BUSH-QUAIL.

Microperdix erythrorhynchus.—Indian names : *Kokin-lawa*. Hind. ; *Kadai*, Tam.

Habitat.—The Western Ghats, Mysore, Belgaum, Satara and Poona, in which it is a constant resident.

Description.—Male—black head with brown patch behind the crown. White band over the eyes ; cheeks and throat white. Upper plumage brown with black oval spots ; wing shafts white. Lower plumage chestnut ; breast fringed with pinkish grey ; each feather on the sides has a large oval black patch fringed with white.

Female—closely resembles the male except in the head, which has no white band over the eyes or black on the forehead, sides of the head are reddish ; lower plumage lighter and the breast very sparsely spotted.

Length, 7 inches ; wing, $3\frac{1}{2}$ inches ; tail, $1\frac{1}{2}$ inches ; legs, red ; irides, brown ; bill, red. Weight, 3 oz.

BLEWITT'S BUSH-QUAIL.

Microperdix blewittii.—Indian name : *Sirsi lawa*, Central India, Mandla, Balaghat, Chota Nagpur, and Chanda.

Habitat.—The Central Provinces and Chota Nagpur.

Description.—The male very closely resembles the Painted Bush-Quail, the male differing in having a white band across the crown, broader than the black band on the forehead, while the female has no white or black band on crown or forehead. It associates in coveys up to a dozen or more, and rises with very little noise.

Length, $6\frac{1}{2}$ inches; wing, $3\frac{1}{2}$ inches; tail, $1\frac{1}{2}$ inches; legs, red; irides, brown; bill red. Weight, $2\frac{1}{4}$ oz.

THE JUNGLE BUSH-QUAIL.

Perdicula asiatica.—Indian names: *Lowa*, Hind.; *Jahar*, Manbhoom; *Girzupitta*, Tel.; *Karilonoga*, Canarese; *Orey*, Kurku; *Ootie*, Gond.

Habitat.—From Kashmir to Ceylon and from Sind to Bengal.

Description.—Male—brown crown with black at the sides. Upper plumage buff, barred and waved with black. Wings barred and blotched with black; outer web of wing quills barred rufous. Forehead and a band over the eye, chestnut with whitish band above. Throat rich chestnut; breast, belly and sides barred, black and white. Thighs and under-tail feathers, buff.

Female—differs from the male only in the lower plumage, which is entirely plain and destitute of marking.

Length, 7 inches; wing, $3\frac{1}{4}$ inches; tail, $1\frac{1}{4}$ inches; legs, red; irides, brown; bill, reddish. Weight, 3 oz.

THE ROCK BUSH-QUAIL.

Perdicula argunda.—Indian names: *Louca*, Hind. and Maki; *Lawunka*, Tel.; *Sinkulch*, Tam.; *Kemp-louya*, Canarese.

Habitat.—Southern and Eastern Punjab, and North of the Ganges to Allahabad, it is found also in the central parts of South India.

Description.—Male—forehead and front of crown, sides of head, chin and throat, rufous; white line over the eye. Upper plumage, wings and tail, greyish brown, coarsely cross-barred with buff. Lower plumage, barred black and white.

Female—nearly the whole plumage, pinkish brown; throat, whitish; wings, rump: and tail, freckled with buff.

Length, 7 inches; wing, $3\frac{1}{2}$ inches; tail, $1\frac{1}{2}$ inches; legs, red; irides, reddish brown; bill, dark slate. Weight, 3 oz.

It avoids mountains, forests and jungle, and affects dry open sandy plains or low hillocks.

THE COMMON HILL-PARTRIDGE.

Arboricola torquicola.—Indian names : *Roli*, *Ramchukra*, Chamba ; *Ban titur*. *Peora*, Garhwal and Kumaon ; *Kaindal*, Kangra.

Habitat.—The outer ranges of the Himalayas from Chamba to Sikkim ; also occurs in the Naga Hills.

Description.—Male—the whole crown deep chestnut with a white line on each side. Eye bordered black ; chin, throat, sides of head and neck black, streaked with white. Breast grey, divided from the neck by a white collar. Belly white, sides grey, each feather having an oval white spot with chestnut margin. Upper plumage, wings and tail olive brown, the feathers being barred and spotted with black.

Female—differs from the male chiefly in the head and neck, the crown being olive brown, streaked with black with a pale rufous eye streak. Throat rufous, streaked with black, followed by a chestnut collar.

Length, 11 inches ; wing, 6 inches ; tail, $2\frac{1}{2}$ inches ; legs, pinkish grey ; irides, brown ; bill, blackish. Weight, $13\frac{1}{2}$ oz.

They frequent dense cover and associate in coveys of about half a dozen, preferring water-courses and ravines, like all hill partridges. They fly swiftly and low, and afford difficult shots.

BLYTH'S HILL-PARTRIDGE.

Arboricola ruficularis.—Indian names: *Peora*, Kumaon; *Kohumbut-pho*, Lepcha; *Lakom*, Bhutan; *Pokkhu*, Daphla Hills.

Habitat.—Lower ranges of the Himalayas to the Daphla Hills.

Description.—Sexes alike. Crown brown, spotted with black grey band over the eye, speckled black throat, sides of the head and neck chestnut, spotted black. Upper plumage, wings and tail olive brown, rump and tail having small black spots and triangular marks. Wing coverts pale olive brown, with large oval black spots and chestnut tips; breast grey; belly whitish; sides deep grey. First ten wing quills brown mottled rufous at the tip.

Length, 10½ inches; wing, 5 inches; tail, 2 inches; legs, pale red; irides, brown; bill, black. Weight, 12 oz.

THE ARRAKAN HILL-PARTRIDGE.

Arboricola intermedia.—Indian name: *Toung-hka*, Burma.

Habitat.—The Arrakan Hills, Bhamo, Cachar and the Naga Hills.

Description.—In colour-markings and size this partridge very closely resembles Blyth's Hill-Partridge, but it has a black throat followed by a chestnut band, and

the black band below this is absent. Sexes alike. It is a geographical race of Blyth's Hill-Partridge.

THE WHITE-CHEEKED HILL-PARTRIDGE.

Arboricola atrigularis.—Indian names: *Peura*, Sylhet; *Duboi*, Assam; *San batar*, Chittagong.

Habitat.—Assam, Sylhet, Cachar, Tipperah, Manipur, Chittagong and Upper Burma.

Description.—Sexes alike. It closely resembles other hill-partridges, but the sides of the body have small oval white spots, but no chestnut. Cheeks white, throat black.

Length, $10\frac{1}{2}$ inches; wing, $5\frac{1}{2}$ inches; tail, $2\frac{1}{2}$ inches; legs, red; irides, brown; bill, black. Weight, 11 oz.

THE GREEN-LEGGED HILL-PARTRIDGE.

Tropicoperdix chloropus.—Indian name: *Toun-hka*, Burma.

Habitat.—Tenasserim, Tavoy, Pegu Hills, Toungu down to Rangoon.

Description.—Sexes alike. Crown and hind neck rich brown; forehead and eye band white, streaked with black, chin white. Throat and cheeks white, spotted with black; neck chestnut, spotted with black. Entire upper plumage rich olive brown with irregular black bars, wings mottled black brown and olive. Wing quills brown with mottled tips. Breast and sides of the body red, barred with black, belly whitish.

Length, $11\frac{1}{2}$ inches; wing, 6 inches; tail, 3 inches; legs, greenish; irides, brown; bill, greenish. Weight, 12 oz.

It rather avoids mountains and prefers low humid jungle on undulating ground.

THE BLACK FRANCOLIN, OR BLACK PARTRIDGE.

Francolinus vulgaris.—Indian names: *Kala teetur*, Hind. and Nepal; *Teetur*, Garhwal; *Vrembi*, Manipur.

Habitat.—Widely distributed in Northern India, absent in Rajputana; it occurs in Kumaon, Garhwal, Nepal, Orissa, Sind and Bengal, Assam and Manipur.

Description.—Male—crown reddish brown, streaked with black. Throat and sides of the head black, with white eye and ear patches. Broad chestnut collar. Upper back black with white spots; lower back rump, and middle-tail feathers black

with narrow white cross-bars. Other tail feathers, black with white bars at the base. Wing quills brown, broadly barred on both webs with rufous. Breast and upper belly deep black, lower belly spotted white. Thighs chestnut, barred with white. Under-tail feathers plain chestnut.

Female—chin and throat whitish; sides of head buff, speckled with black; crown pale buff, streaked with black; back of the neck chestnut. Back rump, and middle-tail feathers dark brown. The latter cross-barred with buff; other tail feathers black with white bars at their bases. Wing quills same as in male. Lower plumage pale buff with black bars. There is great variety in size and weight. Of males the length is about 14 inches; wing, $6\frac{1}{2}$ inches; tail, 4 inches; legs, red; irides, brown; bill, brown to black. Weight from 8 to 20 oz.

THE PAINTED FRANCOLIN, OR PAINTED PARTRIDGE.

Francolinus pictus.—Indian names: same as Black Francolin; *Chilerir*, Kurku; *Kakranj*, Gond.; *Talia teetur*, N. Guzerat.

Habitat.—Those portions of the Peninsula in which the Black Francolin is absent.

Description.—It resembles the Black Francolin, there is no chestnut on the hind neck, and the sides of the head are without bands or spots. In the male,

the throat is spotted, and the white bars on the rump are very distinct and straight. The female has the throat unspotted, and the white bars on the rump are indistinct and wavy.

Length, 13 inches ; wing, 6 inches ; tail, 3 inches ; legs, pale red ; irides, brown ; bill, brown or black. Weight about 13 oz.

THE CHINESE FRANCOLIN.

Francolinus chinensis.—Indian name : *Hka*, Burma.

Habitat.—Burma and the Shan States.

Description.—Male—a broad black band from the bill over the eye to the neck, above this a broad chestnut band, crown black, each feather edged with chestnut. Side of the neck white with black moustachial streak. Chin and throat white ; neck and breast black with double sets of white spots. Back, rump and tail-coverts cross-barred black and white. A rich chestnut patch on the closed wing ; wing quills dark brown barred, on both webs rufous. Black tail, barred white at the base. Belly and sides black with double sets of large pale rufous spots.

Female—head similar to male but the dark bands are brown, and the white parts are tinged with buff. Wings and lower plumage barred with black and buff

instead of being spotted. Back and rump blackish, mottled with buff and barred with white and pale buff.

Length, 13 inches; wing, $5\frac{1}{2}$ inches; tail, 3 inches; legs, orange; irides, reddish hazel; bill, blackish. Weight, 14 oz.

Found in dry open forest and scrub jungle in hilly or undulating country, singly or in pairs.

THE GREY PARTRIDGE.

Francolinus pondicerianus.—Indian names: *Teetur*, *Ram teetur*, *Gora teetur*, *Sufaid teetur*, Hind.; *Khyr*, Beng.; *Gowjul Dooki*, Canarese; *Kondari*, Tam.; *Kuwunzu*, Tel.

Habitat.—Practically the whole of India.

Description.—Sexes alike; the male larger than the female. Forehead chestnut crown and nape, brown, rufous band over the eye, cheeks rufous, chin and throat buff surrounded by a black band or series of spots. Sides of neck barred black and white. Upper plumage and closed wings, tail-coverts and middle-tail feathers brown dashed with chestnut and barred pale buff. First ten wing quills brown, mottled grey towards the base. Outer-tail feathers chestnut and black tipped with buff.

Lower plumage pale buff delicately pencilled with black. Length of male, 13 inches ; wing, 6 inches ; tail, $3\frac{1}{2}$ inches ; legs, bright red ; irides, dark brown ; bill, blackish. Weight, 12 oz.

It frequents bush jungle and cultivated lands, associates in coveys, rises with a loud whir, flies strongly.

THE SWAMP PARTRIDGE.

Francolinus gularis.—Indian names : *Kyah*, *Kyr*, Beng. ; *Bun teetur*, *Jungli te-tur*, Hind. ; *Koera*, *Koi*, Assam ; *Bhil teetur*, Cachar ; *Kakair*, United Provinces.

Habitat.—Throughout the country between the base of the Himalayas to the Ganges, from Rohilkhund to the Sundarbans, Eastern Bengal, Assam, Cachar and Tipperah ; common in the Terai.

Description.—Sexes alike ; male larger than female, and has spurs. Brown crown, buff band round the eye ; chin, throat, cheeks and sides of neck, chestnut. Whole upper plumage, closed wing and middle-tail feathers brown, barred pale buff remaining tail feathers, chestnut with pale tips. First ten wing quills rufous with brown tips ; lower plumage, white, presenting a scaly appearance, being margined with a double border of black and brown. Length of male, 14 inches ; wing, 7 inches ; tail, 4 inches ; legs, red ; irides, brown ; bill, dark brown. Weight, 18 oz.

It associates in coveys, is a strong but short flyer, soon seeking cover. Is found in reed beds and the long grass bordering jheels, rivers and water-courses, and is fond of open patches of mustard, dhal, and pulse cultivation.

THE CHUKOR PARTRIDGE.

Caccabis chucur.—Indian names: *Chukor*, Hind.; *Kau Kau*, Kashmir; *Chukru*, Chamba.

Habitat.—Throughout the Himalayas from Kashmir to Sikkim and in the Punjab Salt Range.

Description.—Sexes alike; the male is slightly larger than the female, and has a blunt spur on each leg. Upper plumage ashy with a rufous tint on the crown of the head; whitish streak over the eye; a black band across the forehead to each eye, continued behind the eye round the throat to form a gorget. Point of the chin black; remainder of the chin, cheeks and throat pale buff; sides of the body banded with grey, black and chestnut; first ten wing quills buff on the outer web; breast grey with rufous on the sides; lower plumage, bright buff.

Length, $14\frac{1}{2}$ inches; wing, $6\frac{1}{2}$ inches; tail, 4 inches; legs, red; irides, brown or orange; bill, deep red. Weight, 27 oz.

A very noisy bird associating in coveys, partial to dry stony ground or grassy hill-sides.

THE SEESEE PARTRIDGE.

Ammoperdix bonhami.—Indian names : *Seesee*, Hind., Punjab and Sind.

Habitat.—Punjab and Sind.

Description.—Male—black forehead and eye streak, a white streak before and behind the eye. Crown, head, ears, cheeks, chin, and throat grey with a buff patch behind the ear. Sides of neck barred grey and buffish white. Upper plumage, wing-coverts and tail, sandy buff with black spots on the rump; wing quills brown with light buff on the outer web. Middle-tail feathers mottled rufous and brown, the others chestnut. Lower plumage, pinkish buff; belly and thighs and under-tail feathers almost white. Sides broadly striped black and chestnut.

Female—has the body narrowly barred with black; the rest of the plumage (including head) being irregularly barred with wavy lines of grey and pale rufous. In other respects it resembles the male.

Length, 10 inches; wing, 5 inches; tail, $2\frac{1}{2}$ inches; legs, yellow; irides, yellow, orange or brown; bill, orange. Weight, 8 oz. Frequents bare, broken ground.

THE SNOW PARTRIDGE.

Lerwa nivicola.—Indian names: *Lerwa*, Nepal; *Jungooria*, Kumaon; *Twora*, *Koor monal*, Garhwal; *Golabi teetur*, *Ter teetur*, Hill States; *Burruf ka teetur*, Kulu; *Biju*, Chamba.

Habitat.—The Himalayas from Kashmir to Sikkim, especially on Tahr and Bhurrel ground; a rare bird.

Description.—Sexes alike. Throat, sides of head, entire upper plumage, visible portions of closed wings and tail closely cross-barred black and buffy white; wings washed chestnut. First ten wing quills black flecked with white, others broadly tipped with white. Lower plumage rich chestnut flecked with white; belly and thighs barred brown and white; under-tail feathers chestnut, tipped with white.

Length, 15 inches; wing, $7\frac{1}{2}$ inches; tail, $4\frac{1}{2}$ inches; legs and bill, red; irides, brown. Weight, 22 oz.

THE HIMALAYAN SNOW COCK.

Tetraogallus himalayensis.—Indian names: *Kullu*, *Lupu*, *Baera*, Nepal; *Huinwall*, Kumaon; *Jer monal*, Mussoorie; *Ram chukor*, Kulu; *Ram chukor*, Kashmir; *Gobind*, Chamba; *Ram chukor*, Garhwal.

Habitat.—Throughout the Himalayas from 11,000 to 18,000 feet in summer and down to 7,000 feet in winter.

Description.—Sexes alike. Crown, back of neck and mantle grey. Upper plumage ashy grey, pencilled with black; rump and wings bordered chestnut. Middle-tail feathers reddish grey, mottled with black; the others chestnut, marked with black. Wing quills white, broadly tipped with black. Sides of the head and neck white. Breast white. Each feather with a black band across it. Lower plumage speckled grey and black. Sides streaked chestnut and black. Length of male, 26 inches; wing, 12 inches; tail, 8 inches; legs, red; irides, brown; bill greenish black. Weight, 6½ lb.

An extremely shy bird, frequently requiring a rifle to bring it to bag. It is fond of bare rocky ground and is gregarious: the call is a melancholy, long-drawn-out “kuk—kük.”

THE WESTERN BAMBOO PARTRIDGE.

Bambusicola fytchii.—Indian name: *Vengte*, Kuki.

Habitat.—Khasia, Garo and Naga Hills, Cachar, Manipur and parts of Burma.

Description.—Sexes alike. A handsome bird, sides of the body and lower breast covered with large hearts shaped black spots. Upper plumage brown, with large

- chestnut spots on the back. Face buff, with a dark band behind the eye down the side of the neck. First ten wing quills rufous or chestnut without any bars; tail long and much graduated; the male has a sharp spur on each leg.

Length, 14 inches; wing, 6 inches; tail, $4\frac{1}{2}$ inches; legs, greenish; irides, brown; bill, dark brown. Weight, 14 oz.

THE RED SPUR-FOWL.

Galloperdix spadicea.—Indian names: *Chota jungli murgi*, Central Provinces; *Kustoor*, Deccan; *Sarabakoli*, Tam.; *Yarrakohi*, Tel.; *Chotieng*, Kurku; *Chaudal* and *Kor*, Gond.

Habitat.—The Oudh Terai. From the Ganges to the Pulni Hills in Madras at elevations up to 6,000 feet.

Description.—Male—forehead dark brown, each feather edged with grey; crown dark brown. Upper plumage chestnut, the feathers margined with grey; tail brown mottled with rufous. Throat sides of the neck greyish brown, lower plumage bright chestnut except belly and thighs which are smoky brown. Wing quills plain brown.

Female—Upper plumage mottled black and buff; lower plumage as in male, but with black spots on breast. Under-tail feathers black with chestnut bars.

Length of male, 14 inches; wing, 6 inches; tail, 5 inches; legs and bare skin round eye, red; irides, yellow or brown; bill, brown. Weight, 14 oz.

THE PAINTED SPUR-FOWL.

Galloperdix lunulata.—Indian names: *Askol*, Orissa and Singbhoom; *Hootka*, Chanda; *Cul-koli*, Tam.; *Jitta-Kodi*, Tel.

Habitat.—Rather local over a considerable portion of the Peninsula.

Description.—Male—head and neck black spotted with white, back and tail-coverts rich chestnut with black-edged with white spots, some of the wing feathers have a metallic green gloss. Tail black with green gloss. First ten wing quills brown. Throat cream with black spots. Sides of the body chestnut; breast buff, spotted with black; belly chestnut with white, black-edged spots under-tail feathers black and chestnut mixed.

Female—black crown with narrow chestnut streaks. Chin and throat chestnut and buff. Tail blackish brown. Rest of plumage dark brown tinged with olive.

Length, 13 inches ; wing, 6 inches ; tail, 5 inches (female smaller) ; legs, lead colour ; irides, brown ; bill, horn colour. Weight, 10 oz.

It is specially partial to rocky jungle, is difficult to flush, and flies straight for the thickest cover.

THE BLOOD PHEASANT.

Ithagenes cruentus.—Indian names : *Chilmeah*, *Selmung*, Nepal ; *Sameh*, Sikkim.

Habitat.—Nepal, Sikkim and Western Bhutan.

Description.—Male—forehead, space round the eye, black mixed with crimson crown buff and crest feathers grey. Neck and mouth deep grey, each feather with a white shaft streak. Upper plumage grey. Tail-coverts with broad crimson margins. Wing quills brown with white shaft streaks. Tail feathers grey with black bases, each feather margined with crimson, chin and throat crimson. Sides of the neck and gorget green. Lower plumage green. Under-tail feathers crimson, tipped with yellow.

Female—resembles male, but the crest and neck are slate colour, the upper plumage reddish brown, tail dark brown, chin and throat and lower plumage reddish and the crest feathers wholly slate colour. Length of male, 18 inches ; wing,

8½ inches; tail, 6½ inches (female smaller). Legs, intense red; irides, brown; bill, black. In the male the bare parts of the head are deep red, in the female yellow carmine. Weight, 20 oz.

It affects pine forests, is a great runner, takes very short flights and never crows.

THE GREY PEACOCK PHEASANT.

Polyplectrum chinquis.—Indian names: *Munnowar*, Assam; *Deodrug*, Garo Hills; *Shway-down*, Burma; *Kat-mohur*, Chittagong.

Habitat.—Outer slopes of the Himalayas from Sikhim to Assam; thence down to Tenasserim.

Description.—Male—crown and hairy crest mottled black and white, hind neck finely barred grey and brown. Upper plumage, wings and tail, brown dotted all over with white. Mantle and wing feathers with bright round metallic purple spots with whitish rings; each tail feather has two large metallic green eyes, bordered black and grey. Throat white, lower plumage dark brown dotted with white.

Female—upper plumage, closed wings and tail dark brown, rump feathers bearing small triangular marks. Tail feathers, except the middle pair, have two

ill-defined metallic eyes. Throat white, lower plumage brown and buff. Length of male, 25 inches; wing, 8 inches; tail, 13 inches (female smaller); legs, blackish; irides, white; bill, dark brown; skin of face, pale yellow.

THE CRIMSON HORNED PHEASANT.

Tragopan satyra.—Indian names: *Lungee*, or *Singul Cheera*, Garhwal and Kumaon; *Monal*, Nepal; *Tirriac-pho*, Lepcha; *Omo*, *Bhoop*, Bhutia; *Nunal*, Sikkim; *Dafia*, Bengal.

Habitat.—The Himalayas from Garhwal to Sikkim, breeding from not far below the snows.

Description.—Male—face thinly covered with small black feathers, neck and lower plumage rich red, body sprinkled with round white spots edged with black. Loose skin of the throat deep blue. Tail black mottled with rufous, wing quills much barred with rufous.

Female—upper plumage yellowish brown, blotched with black, grey and buff. Lower plumage sandy rufous. Length of male, 26 inches; wing, 11 inches; tail, 10 inches; horns, blue; bib, orange; legs, flesh-coloured; irides, brown; bill, dark brown. Weight, $4\frac{1}{2}$ lb.

THE WESTERN HORNED PHEASANT.

Tragopan melanocephalus.—Indian names: *Jowar*, Garhwal; *Sing monal*, North-Western Himalayas; *Fulgoor*, Chamba.

Habitat.—The Himalayas from Garhwal to Kashmir.

Description.—Male—head black; crest black tipped with crimson; neck crimson, chest fiery red. Upper plumage buff spotted with white, each spot margined with black. Tail black barred with buff. Lower plumage black, each feather with a large white spot.

Female—generally greyish brown, mottled and barred with black and buff. Lower plumage paler with white spots, margined with black. Length of male, 27 inches; wing, $10\frac{1}{2}$ inches; tail, $10\frac{1}{2}$ inches (female smaller); sides of the head, red; horns, blue; bib, purple; legs, grey; irides, brown. Weight, $4\frac{1}{2}$ lb.

THE GREY-BELLIED HORNED PHEASANT.

Tragopan blythi.—Indian names: *Hurhuria*, *Soonsoorea*, Assam; *Noo*, Naga Hills.

Habitat.—Assam, Naga and Chin Hills and Sadiya.

Description.—Male—resembles the western horned pheasant, but the lower plumage is smoky grey, the upper plumage has a maroon ground and there is a black band round the throat. Tail coverts white and chestnut. Sides of the body spotted grey.

Female—hardly distinguishable from the male crimson horned pheasant, but blacker above. Length of male, 24 inches; wing, 10 inches; tail, $7\frac{1}{2}$ inches; legs, brown; irides, brown; skin round the eye, orange; horns, blue; bib, yellow, tinged with blue.

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THE MONAL PHEASANT.

Lophophorus refulgens.—Indian names: *Lout* (male), *Ham* (fem.), *Neelmohur*, *Jungli mohur*, Kashmir; *Neelgur* (male), *Nulwai*, (fem.), Chamba; *Monal*, Kulu and Central Himalayas; *Damphia*, Nepal; *Phodongpho*, Sikkim.

* *Habitat.*—Throughout the Himalayas from Kashmir to Sikkim; only at high elevations in summer—8,000 to 15,000 feet.

Description.—Male—crest and head bright metallic green; mantle bronze green; back of the neck copper colour. Upper back, rump, tail coverts purple, back white. Tail chestnut, lower plumage black.

Female—crown and sides of head, neck and mantle and upper back, blackish, with irregular rufous shaft streaks and lines; rump brown, marked with black; tail black with rufous cross bars tipped with white, chin and throat white, lower plumage, speckled and streaked with cream colour. Length of male, 26 inches; wing, 11½ inches; tail, 9 inches (female smaller); legs, greenish; irides, brown; bill, dark brown; face skin, blue. Weight about 5 lb.

THE COMMON PEA-FOWL.

Pavo cristatus.—Indian names : *Mohur*, Hind. ; *Menjur*, Western Duars ; *Mujur*, Central Provinces ; *Marja*, Bhutia ; *Mongyang*, Lepcha ; *Moir*, *moira*, Assam ; *Dode*, Garo Hills ; *Myl*, Tam. ; *Nimili*, Tel. ; *Nowl*, Can. ; *Mara*, Kurku ; *Mull*, Gond.

Habitat.—Throughout India from the Indus to Assam. In many parts of India this is a sacred bird : before shooting it the sportsman should enquire if there be any objection.

Description.—Male—head, neck and upper parts of breast and mantle, rich purplish blue. First ten wing quills chestnut; wing coverts and remaining quills pale buff, barred irregularly with black.

Female—crest on head, head and upper neck, chestnut; lower neck and upper mantle and breast, green; feathers edged with brown; chin, throat, parts of neck

and sides of the head, white. Upper plumage brown, lower plumage rufous buff. Tail coverts and outer part of wing barred with buff. Tail black mottled buff; crest feathers webbed only at tip and spread out like a fan.

Length of male (to full extent of train), 90 inches; wing, 18 inches; tail, 20 inches; legs, brown; irides, brown; bill, brown. Weight, 11 lb.

THE BURMESE PEA-FOWL.

Pavo muticus.—Indian names: *Down*, *Oodown*, Burma; *Murail*, Talain; *Toosia*, Karen.

Habitat.—Throughout Burma to Tenasserim.

Description.—Male—head blue; upper neck and mantle, covered with rounded greenish, bronze feathers with a purplish centre and narrow black margin. First ten wing quills chestnut, remainder black or dark brown. Wing coverts green and purple, not barred. Other parts resemble the common variety.

Female—resembles the male except that the inner feathers of the wing are barred and mottled with buff. The back and rump are brown barred with buff without the brilliant scale-like feathers. Naked skin of face partly yellow, partly blue. Length of male (with train), 90 inches; wing, 19 inches; tail,

22 inches ; legs, dark brown ; irides, dark brown ; bill, black. Weight, 11 lb. In this species the feathers of the crest are webbed throughout and bunched together.

THE CHEER PHEASANT.

Catreus wallichii.—Indian names : *Chihir*, Nepal ; *Cheer*, Kumaon and Garhwal ; *Bunchel*, Mussoorie ; *Chummun*, Chamba, Kulu, etc.

Habitat.—The lower Himalayas, from Nepal to Chamba, at elevations from 4,000 to 10,000 feet.

Description.—Male—crown and crest brown ; throat and neck ring whitish. Mantle, back, wing coverts, pale buff barred with black, with a narrow grey tip and a bar of pale blue. Rump, chestnut, barred with black ; tail, buff, barred black and chestnut ; lower plumage, pale buff with irregular black bars.

Female—crown and crest edged with buff ; sides and back of the neck, black ; mantle, chestnut ; upper plumage, black, buff and rufous. Tail, buff, barred and mottled with black and rufous. Throat, white ; breast, black ; belly, chestnut.

Length, 40 inches ; wing, 10 inches ; tail, 20 inches ; legs, slaty brown ; irides, red ; bill, brown ; facial skin, crimson. Weight, 3 lb.

THE COMMON KOKLASS PHEASANT.

Pucrasia macrolopha.—Indian names: *Pokhras*, Kumaon and Garhwal; *Koklass*, Almora to Simla; *Plaush*, Simla; *Kouk*, Kulu; *Plas*, Kashmir; *Kukrola*, *Kuk*, Chamba.

Habitat.—From Kumaon to Kashmir, from 3,000 to 8,000 feet.

Description.—Male—head, glossy black, with a large patch of white on each side of the neck. Upper plumage and sides of the body, ash colour, streaked with black; middle crest deep fawn, lateral crests black, glossed with green. Breast and belly, rich chestnut. Wing quills, dark brown; middle tail feathers, chestnut, tipped with grey.

Female—general colour rufous, streaked with black; throat, creamy buff; lower plumage, pale rufous, and belly, pale buff, marked with black.

Length, 24 inches; wing, 9½ inches; tail, 10 inches; legs, ashy; irides, dark brown; bill, black. Weight, 2½ lb.

THE NEPAL KOKLASS PHEASANT.

Pucrasia nepalensis.—Indian name: *Pokrass*, Nepal.

Habitat.—Nepal.

Description.—Generally like the common koklass, but the upper plumage and sides of the body are black, each feather being narrowly margined with grey. The female closely resembles the female of the common koklass, and both birds are somewhat smaller and lighter than the latter. This is a geographical race of the common Koklas Pheasant.

THE WHITE-CRESTED KALEEJ PHEASANT.

Gennæus albicristatus.—Indian names : *Kaleej*, Hind. ; *Kookeera*, Mussoorie ; *Kalaysur* (male). *Kalaysre* (female). Kulu ; *Kolsa*, Punjab.

Habitat.—The lower and middle ranges of the Himalayas from Hazara to Kumaon. The common pheasant of the lower Himalayas and Siwaliks.

Description.—Male—head and neck, blue-black, with a white crest. Mantle wing coverts, back and rump, black. Tail, black, with a slight green gloss. Breast and upper belly, greyish white ; lower plumage, brown.

Female exhibits no white on the mantle. The head and crest are brown ; upper plumage, brown ; tail, glossy black ; throat, grey ; lower plumage, reddish brown. It favours thick clumps of bushes and shrubs near rivers and thorny thickets near cultivation. It makes a peculiar drumming sound with its wings during the breeding season.

Length, 25 inches; wing, 9 inches; legs, brownish grey; irides, orange-brown; bill, pale green; face skin, crimson. Weight, 2 lb.

THE NEPAL KALEEJ PHEASANT.

Gennæus leucomelanus.—Indian name : *Kaleej*, Nepal.

Habitat.—Nepal.

Description.—Closely resembles the white-crested kaleej, but the crest is black, no portion of the upper plumage shows traces of white; back and rump have narrow white fringes. The lower plumage is variegated, not black. The female cannot be distinguished from that of the white-crested kaleej. These birds are very fond of perching on trees.

THE BLACK-BREASTED KALEEJ PHEASANT.

Gennæus horsfieldi.—Indian names : *Doreek*, Assam and Garo Hills; *Mathura*, Sylhet and Chittagong; *Yit*, Burmese.

Habitat.—Lower Himalayan ranges, Assam, Tipperah, Chittagong, and Manipur, also Burma.

Description.—Male—whole plumage glossy black, not vermiculated with white; crest, black: back and rump with broad white fringes. Lower plumage, black.

Female—same as the three preceding species. Weights, measurements, etc., the same.

THE BURMESE SILVER PHEASANT.

Gennaeus lineatus.—Indian name: *Yit*, Burma.

Habitat.—Burma.

Description.—The silver pheasant is a variety of the Kaleej pheasant. In the Indian varieties the upper parts of the cock, down to the rump, are black. In the Burmese forms there is much white in the plumage of the upper back, whence the name "silver" pheasant. The hen is distinguished from the Indian form by having V-shaped marks round the neck. Burmese silver pheasants are split up into several local races. In one race, which is found in most parts of Burma, the white on the back of the cock takes the form of fine wavy lines alternating with black ones. This is the typical Burmese silver pheasant.

In another form, which is common round about the Ruby Mines and in the Shan States, the white and black on the back take the form of semi-circles. Some people consider this a separate species, which they call Anderson's Silver Pheasant (*Gennæus andersoni*).

THE RED JUNGLE FOWL.

Gallus ferrugineus.—Indian names: *Jungli* or *Ban Murgli*, Hind.; *Ban Kokra*, Beng. and Assam; *Natsu-pia*, Bhutia; *Pazok-tchi*, Lepcha; *Tu-gyet*, Burma; *Kura*, Chittagong.

Habitat.—The lower Himalayas, northern India and the Central Provinces wherever there is *sal* forest, Assam, Bengal and Burma.

Description.—Male—crown hackles, rich orange red with black shaft streaks; lower hackles, golden. Back, black; rump, maroon; tail, black. Whole of lower plumage, deep black.

Female—crown, brown; mantle black, tipped with yellow. Upper plumage, brown or buff, much freckled with black; tail, brown; lower plumage rufous. Usually found in small parties; the cock crows like the domestic rooster; the hen cackles like the domestic hen, both when alarmed and after laying.

Length of male, 28 inches : wing, 9 inches : tail, 14 inches. Female—length, 17 inches, wing, 7½ inches : tail, 6 inches. Legs, bluish ; comb and neck skin, red ; irides, red ; bill, black. Weight, 2 lb.

THE GREY JUNGLE FOWL.

Gallus sonnerati.—Indian names : *Jungli Murghi*, *Ban Murgee*, Hind. ; *Komri*, Mt. Abu ; *Purda Komri*, Chanda ; *Kumbadi*, Deccan ; *Adavikode*, Tel. ; *Katikoli*, Tamil ; *Koli*, Can.

Habitat.—Southern India, parts of Central India and Rajputana.

Description.—Male—hackles, black, each feather with a yellow spot at the tip like sealing-wax ; back and rump, black and grey. Tail coverts, purple ; tail, black. Lower plumage, black and grey, the feathers having white shafts ; sides of the body marked chestnut ; wing quills, brown.

Female—lower plumage, mainly white ; head, brown ; mantle dark brown ; upper plumage, light brown, speckled with black. Tail, black, mottled with rufous. Its habits are the same as those of the red jungle fowl. The time of breeding varies with the locality. The cock crows quite differently to the red

jungle fowl. Length of male, 28 inches; wing, 9 inches; tail, 15 inches. Female—length, 16 inches; wing, 8 inches; tail, $5\frac{1}{2}$ inches. Legs, yellow; irides, red; bill, black; comb, wattles and skin, crimson. Weight, over 2 lb.

THE GREAT INDIAN BUSTARD.

Eupodotis edwardsi.—Indian names: *Toogular*, *Gudain*, Punjab; *Sohun Chirya*, *Gugumbher*, *Hookna*, Gwalior, Jhansi, etc.; *Hoom*, Marathi; *Kara-dhouk*, *Maldhouk*, Deccan; *Gurahna*, Sind; *Buttmeka*, *Bat-mayka*, Tel.; *Heri hukki*, *Arl-Koojina-hukki*, Can.; *Kanalmyle*, Tam.; *Ghorad*, Kathiawar.

Habitat.—Punjab and Sind, the Central Provinces and southwards, and generally over the Peninsula, except the Western Coast. Rare in the United Provinces, unknown in Behar, Bengal, Chota Nagpur and Orissa.

Description.—Male—crown and crest, black; sides of head, throat and neck white in old birds, minutely barred with black in young birds. Upper plumage, tail and closed wings sandy buff, pencilled with black; wing coverts, black, tipped with white. A broad black band across the breast, lower plumage white, flanks dark brown.

Female—closely resembles the male, but is smaller. It frequents open grassy plains with bare patches. Length of male, 48 inches; wing, 27 inches; tail, 13 inches. Female—length, 36 inches; wing, 20 inches. Legs, yellow; irides, yellow; bill, brown. Weight of male, 25 lb.; female, 10 lb.

THE INDIAN HOUBARA BUSTARD.

Houbara macqueeni.—Indian names: *Tilaur*, *Houbara*, Punjab and Sind.

Habitat.—A winter visitor to Sind, the Punjab and parts of Rajputana and the North-West Provinces.

Description.—Sexes alike, but the female is smaller. The crest springs from the middle of the crown, the front feathers being black with white tips, the hinder ones quite white. The black ruff begins at the ears and ends across the breast. Upper plumage fulvous, barred and pencilled with black; throat, white; neck speckled with fulvous; lower plumage white. It frequents level or undulating semi-desert plains. Length of male, 28 inches; wing about 16 inches; tail about 10 inches. Female—length up to 27 inches; wing about 15 inches; tail about 9 inches. Legs, yellow; irides, yellow; bill, dark brown. Weight, male, $5\frac{1}{4}$ lb.; female, $3\frac{3}{4}$ lb.

THE LITTLE BUSTARD.

Otis tetrax.—Indian name : *Chota Tilaur*, Hind.

Habitat.—A winter visitor to the Punjab, west of the Indus : stragglers have been found as far east as Saharanpur.

Description.—Male—has the forehead and crown fulvous, much marked with black ; throat and sides of the head, bluish grey ; neck, black ; white bands at the back of the head, and down each side of the neck, meeting in front. Lower plumage white ; upper plumage and closed wings, fulvous, banded black ; tail, white, banded with black : middle pair of tail feathers buff and black.

Female—resembles the male, but the breast and sides of the body are spotted as well as barred with black ; upper plumage coarsely marked with black. Length of male, 18 inches ; wing, 9½ inches ; tail about 4 inches. Female—length about 19 inches ; wing, 10 inches ; tail, 4 inches. Legs, yellow ; irides, brown ; bill, black. Weight about 2 lb.

THE BENGAL FLORICAN.

Sypheotis bengalensis.—Indian names : *Charas*, *Charat*, Hind. ; *Dabar*, Nepal ; *Ooloomoora*, Assam.

Habitat.—Eastern Bengal, Assam Valley, Nepal, Terai, Bhutan, Duars, Oudh and United Provinces north of the Ganges. Common in the grass of the Terai.

Description.—Male—in summer plumage has the whole head, neck and lower plumage black, with a full crest and a tuft on the breast. Upper plumage, black, mottled with buff; wing coverts, white; middle tail feathers, black, mottled with fulvous. The male in winter plumage and the female at all seasons have the upper plumage, wings and tail fulvous, much marked with black; lower plumage, fulvous with neck and breast mottled with black. It frequents high grass tracts, grass clurs and occasionally cultivation. Male—length up to 25 inches; wing about 13 inches; tail about 7 inches. Female—length up to 28 inches; wing, 14 inches; tail, 7 inches. Legs, yellow; irides, yellow; bill, brown above, yellow below. Weight, 4½ lb.

THE LESSER FLORICAN.

Sypheotis aurita.—Indian names: *Ker mor*, Guzerat; *Tun mor*, Deccan and Marathi; *Chini mor*, Belgaum; *Khartitar*, Bhil; *Likh*, *Chota Charat*, United Provinces; *Barsati*, *Kala Tugder*, Rohtak, Gurgaon; *Churas Chulla Charas*, S. India; *Khan noul*, Can.; *Niala nimili*, Tel.; *Wurragu Koli*, Tam.; *Tilori*, Kathiawar.

Habitat.—General throughout India, resident in some parts, partially migrant in others.

Description.—It generally resembles the Bengal Florican, but is much smaller, and frequents grass plains with low jungle and young crops. It performs a curious saltatory exercise during the nesting season, clucking as it jumps and when running it raises its tail after the manner of domestic fowls. Male—length up to 19 inches; wing, 8 inches; tail, 4 inches. Female—length up to 21 inches; wing, $9\frac{1}{2}$ inches; tail, 5 inches. Legs, pale yellow; irides and bill, yellow. Weight about $1\frac{1}{2}$ lb.

In the breeding season the male of this species grows curious plumes on each side of the head. There are three of these on each side, each consisting of a stalk with a feathery tuft at the end.

THE WATER GAME BIRDS.

THE MUTE SWAN.

Cygnus olor.—Indian name: *Penr*, Punjab.

Habitat.—A rare visitor to Peshawar, Hazara, Sind.

Description.—Sexes alike; adult birds, pure white; young birds, pale brown changing to white at fifteen months. The adult male has a knob at the base of the upper mandible; the female has a smaller one; the young have none. Adult birds have the bill orange red, the knob, skin between eye and bill, a patch on the nostril, the nail margins of both mandibles and base of lower one are black, irides brown, legs and feet black. Young birds have the bill fleshy grey or pale buff.

Length, 5 feet. Weight from 13 to 19 lb.

THE WHOOPER SWAN.

Cygnus musicus.—A visitor. Has been reported in India on only five or six occasions.

Description.—Pure white, bill yellow and black, no knob on the upper mandible. Bare skin in front of the eye yellow. The young are pale brown with dull flesh-coloured bills.

BEWICK'S SWAN.

Cygnus bewicki.—A visitor. Has been reported in India on only two occasions.

Description.—The adult is pure white; the young pale brown. The bill is yellow and black, the yellow being much less in extent than in the Whooper. No knob on the upper mandible.

THE GREY LAG GOOSE.

Anser anser.—Indian names: *Sona Raj hans*, *Kurria Sona*, Upper India; *Budbay*, Doab; *Karhans*, Bhagalpur; *Mogala*, *Mogala butuk*, *Mogala hans*, Nepai Terai; *Kangnai*, Manipur; *Tau-Ngan*, Burma.

Habitat.—A winter visitor to Upper India, Assam, Manipur and the Chindwin and Irrawadi rivers. This and the bar-headed goose are the only two species that are common in India.

Description.—Gregarious ; sexes alike ; head and neck, brown ; mantle, black ; scapulars and inner secondaries, brown, tipped with grey. Rump, grey ; upper-tail coverts, white ; breast, ashy grey ; sides of the body, brown ; belly, white ; axillaries, bluish grey.

Length about 32 inches ; wing, 18 inches ; tail, 6 inches ; bill and legs, pale brown to whitish ; irides, brown. Weight, 9 lb.

THE LARGE WHITE-FRONTED GOOSE.

Anser albifrons.—Indian name : *Raj hans*.

Habitat.—A rare winter visitor.

Description.—Forehead, white, the white sometimes extending to the chin ; head and neck, brown ; mantle, black ; scapulars, ashy brown. Rump, dark brown or blackish ; breast, pale ashy grey ; lower plumage, white, more or less blotched with black : in some birds the black markings occupy a bigger area than the white.

Length about 27 inches ; wing, 15 inches ; tail, 5 inches (female smaller) ; bill, orange yellow ; irides, brown ; legs and feet, orange. Weight about 5 lb.

THE BAR-HEADED GOOSE.

Anser indicus.—Indian names : *Raj hans*, *hans*, *birwa*, Hind. ; *Paria*, Nepal ; *Neerbathoo*, S. India ; *Bunooria hans*, Assam ; *Badi hans*, Chittagong ; *Kangnai*, Manipur ; *Tau-Ngan*, Burma.

Habitat.—A cold weather visitor and common in many parts of India.

Description.—Easily distinguishable from other geese by the black bars across the back of the head and neck. Sexes alike.

Length about 30 inches ; wing, 17 inches ; tail, 6 inches ; bill, from yellow to orange with a black nail ; legs and feet, yellow to orange ; claws, black ; irides, deep brown. Weight up to 7 lb.

THE COMMON SHELD DUCK.

Tadorna cornuta.—Indian names : *Raraia Chuckwa*, *Sufail Surkhab*, Hind. ; *Nirajee*, Sind.

Habitat.—An uncommon winter visitor in the northern parts of India.

Description.—Male—head and neck, glossy black ; upper breast and mantle, white ; lower breast, chestnut collar in front of the wings, interrupted on the breast by a longitudinal black or dark brown band running down breast and abdomen. The remainder of the lower plumage and under-wing white. Upper-wing coverts, scapulars, back, rump and upper-tail coverts, white ; outer scapular, black ; tail, white, with black tip. Primaries and their coverts, black. Outer secondaries, bronze green on the outer, white on the inner web ; inner secondaries, white ; the female resembles the male, but the chestnut parts of the body plumage are duller, and the dark portions thereof are brown. It frequents the larger lakes and rivers and affects the shore until disturbed. It is gregarious and shy, flies with slow and laboured beats of the wings and seldom or never dives. Male—length, 24 inches ; wing, 13 inches ; tail, $4\frac{1}{2}$ inches. Female—length, 21 inches ; wing, $11\frac{1}{2}$ inches ; tail, 4 inches. Bill, red with a dusky nail ; irides, brown ; legs and feet, flesh colour. Weight under 3 lb.

THE RUDDY SHELD DUCK OR BRAHMINY DUCK.

Casarca rutila.—Indian names : *Chuckwa*, *Surkh-áb*, *Lal*, Hind. ; *Mungh*, Sind ; *Bugri*, Beng. ; *Neerbathoo Neer Kolee*, S. India ; *Basana*, *Chillunca*, Tel. ; *Kesarpandia*, *Pandahansa*, Ooriya ; *Hintha*, Burma ; *Budak*, Kurku ; *Kabuda*, Gond.

Habitat.—A winter visitor to almost every part of India.

Description.—Male—head, buff; neck, mantle, sides of the breast, lower plumage and belly, bright golden chestnut. Axillaries and under-wing coverts, white. Rump, upper-tail coverts and tail, black. Wing coverts, white, with a buff tinge; primaries and their coverts, black. Outer secondaries, bronze green, with white on the inner web; other secondaries, chestnut.

Female—resembles the male, but does not assume the black ring round the neck, which the male assumes in summer. This bird swims little, keeps almost entirely to the land, avoids all cover, is remarkably wary and is a sentinel to all other ducks. It has a peculiar call which sounds like *ah onk*. It is rank and fishy in taste. Male—length, 26 inches; wing, 15 inches; tail, 6 inches. Female—length, 23 inches; wing, 14 inches; tail, 5½ inches. Bill, black; irides, dark brown; legs and feet, very dark brown. Weight about 4 lb.

THE COMB DUCK.

Sacridiornis melanonotus.—Indian names: *Nukta*, *Nukwa*, Chota Nagpur; *Naki hansa*, Ooriya; *Jutu Chillauna*, Tel.; *Dod sarle haki*, Can.; *Neer Koli*, S. India; *Taubay*, Burm.

Habitat.—One of the few ducks that resides permanently and nests in India. Common in all parts north of Mysore, except Sind, the North-West Frontier Province, Western Punjab and parts of the Deccan. This duck occurs in Burma.

Description.—Male—head and neck, white, mottled with black. Mantle and lower plumage, white; sides of the body, pale grey; axillaries and under-wing coverts, black; back and scapulars, black; primaries, black; secondaries, brown on the inner, bronze green on the outer web; the upper-wing coverts, bronze green. Rump, tail coverts and tail, black.

Female—closely resembles the male, but she lacks a large, black, fleshy knob that grows out of the top of the bill of the male. It affects weedy tanks and swamps and sluggish streams. Is generally found in pairs; is heavy and clumsy, but lies well and is not wary.

Length of male, 30 inches; wing, 15 inches; tail, nearly 6 inches. Female—length, 27 inches; wing, 11½ inches; tail, 4 inches. Bill, black; irides, dark brown; legs and feet, dark slate. The comb of the male is black. Weight, 5¼ lb.

THE SMALL WHISTLING DUCK OR TEAL.

Dendrocygna javanica.—Indian names: *Silli*, *Silhali*, *Chihhi*, Hind.; *Saral*, *Shareil*, *Harrali* *hais*, Beng.; *Hansali*, Oriya; *Adla*, Mahr.; *Yerra chillura*, Tel.; *Chembutura*, Tam.; *Horali*, Assam; *Tingri*, Manipur; *Sissalee*, Burma.

Habitat.—A permanent resident in most parts of India, except the Himalayas, Kashmir and the Punjab ; very common in Bengal.

Description.—Sexes alike. Forehead and crown, fulvous brown ; sides and back of the head, lighter ; chin, throat and neck, grey. Breast, pale orange brown ; belly and sides of the body, chestnut ; under-tail coverts, white ; mantle, light brown ; back and scapulars, dark brown with rufous bars ; rump, black ; tail coverts, chestnut ; tail, brown ; lesser and middle wing coverts, maroon ; greater coverts, dark ashy ; other wing quills, axillaries and under-wing coverts, black. It prefers weedy ponds and marshes, village tanks, roadside drains and paddy-fields ; it is not shy ; is fond of perching on trees, is an excellent swimmer and diver, and utters a double whistle when rising and during flight. As the wings of this and the next species are broad and rounded at the end, these ducks, as they fly overhead, look quite different from all other ducks.

Length, 16 inches ; wing, $7\frac{1}{2}$ inches ; tail, $2\frac{1}{2}$ inches ; bill, legs and feet, brownish blue : the nail on the bill nearly black ; irides, brown ; eyelids, bright yellow. Weight up to $1\frac{1}{4}$ lb.

THE LARGE WHISTLING DUCK OR TEAL.

Dendrocygna fulva.—Indian names, same as those of the Small Whistling Teal.

Habitat.—All over India, but less common than the smaller variety.

Description.—Sexes alike, and generally resembling the smaller whistling duck except that there is a black band down the back of the neck, and the upper-tail coverts are white instead of chestnut. Its habits are identical with those of the smaller variety, and it is more wary, gets away quicker, and is more difficult to shoot.

Length, about 20 inches ; wing, 9 inches ; tail, $2\frac{1}{2}$ inches ; bill, legs and feet, dark slaty ; irides, brown. Weight up to 2 lb.

THE COTTON TEAL.

Nettopus coromandelianus.—Indian names : *Girri*, *Girria*, *Girja*, *Gurgurra* Hind. ; *Ghangariel*, *Ghangani*, Beng. ; *Chota Goiree*. Bihar : *Ballia hans*, Dacca, Assam, Sylhet ; *Gandana*, Ooriya ; *Lerriget-perriget*, Koll ; *Adla*, West Coast ; *Kalagat*, Burma.

Habitat.—Generally throughout India and Burma ; the smallest duck with the longest name ! A permanent resident, breeding in India.

Description.—Easily distinguishable from any other Indian teal by having dark axillaries, either entirely black or else brown, margined with grey. Nearly all the secondaries are broadly tipped with white, and there is a dark cap on the crown. The male has a greenish black necklace and a large white patch on the primaries,

only seen when he is flying. In the female, the primaries are entirely black or very dark brown. It swarms in thousands in suitable places. It flies low and is easily netted. Its flight is remarkably swift and tricky; it is a good diver, and wounded birds are generally lost. When flying, it utters a peculiar cry which sounds like the command "fix bayonets" said very swiftly and softly.

Length about 13 inches; wing, $6\frac{1}{2}$ inches; tail, $2\frac{1}{2}$ inches; the female is slightly smaller. Bill (male), black; irides, bright red; legs, black. The female has the bill brown above, yellowish below; irides, brown; legs, yellowish. Weight, 10 oz.

THE GREY DUCK OR SPOTTED BILL.

Anas paeilorhyncha.—Indian names: *Hunjur*, Sind; *Garampur*, *Bata*, *Gugral*, Hind.; *Naddun*, Nepal; *Neer-bathoo*, Tam.; *Neer Koli*, Can.; *Kara*, Manipur; *Ludeen*, Behar; *Taubay*, Burma.

Habitat.—From the Himalayas to Cape Comorin, but not in Kashmir, Assam, Sylhet, Cachar, Manipur, Arrakan, and Upper Burma. It breeds in India in the rainy season.

Description.—Sexes alike, easily distinguishable from other ducks by the orange or yellow spot on the tip of the upper mandible. It frequents ponds, tanks, jheels,

lakes, and pebbles red-margined water. It is found singly or in pairs as a rule, but in large open water occurs in flocks. It is not shy and is often found near villages. It is commonest in Manipur. Male—length, 24 inches : wing, 11 inches : tail, 4 inches. Female—smaller. Bill, black : the base of the upper mandible, orange : the tips of both mandibles varying from orange to yellow : tip of the nail, black : irides, brown : legs and feet, bright red. Weight up to 3½ lb.

THE COMMON TEAL.

Nettion cecum.—Indian names : *Murghabi*, *Chota murghabi*, Kerra, *Lohya kerra*, *Putur soach uruka*, Hind. : *Kanto*, Sind : *Baigilagairi*, Nepal ; *Naroib*, *Tulsia bigri*, Beng. : *Killbruni*, Madras : *Sorlai haki*, Can. : *Gaivee*, Behar.

Habitat.—A winter visitor found throughout India and extremely common.

Description.—Male—chin and patch round the eye black, a metallic green band from the eye down the side of the neck : rest of the head, rich chestnut. Lower neck, mantle, sides of the breast, pencilled black and grey. Outer scapulars cream, bordered black on the outer web. Back and rump, light brown. Outer web of the primaries, black : inner web, drab : axillaries, white ; three or four secondaries metallic green. Speculum, green or purple in various lights.

Female—head streaked brown ; sides of the head and neck, pale buff, spotted and streaked with brown ; chin and throat marked with brown. Mantle, back, and scapulars, dark brown ; rump and upper-tail coverts, dark brown. Wing similar to that of the male ; breast, sides of the body and tail coverts, white ; belly, whitish. There is no oval spot at the sides of the base of the upper mandible. It is wary or approachable according to the treatment it receives ; it is a fast flyer, is partial to weedy water, and is gregarious.

Length, $14\frac{1}{2}$ inches ; wing, $7\frac{1}{2}$ inches ; tail, 3 inches ; bill, blackish ; irides, brown ; legs and feet, grey or lead colour. Weight up to 15 oz.

THE GARGANEY OR BLUE-WINGED TEAL.

Querquedula ciria.—Indian names : *Charitwa*, *Patari*, *Khyra*, Hind. ; *Gangrobe-Girria*, Beng.

Habitat.—A winter visitor to every part of India. It is one of the commonest ducks.

Description.—Male—forehead and crown blackish, with a broad band of white from the front of the eye skirting the back of the crown ; chin, black ; sides of the head, throat and neck, chocolate brown. Mantle and breast barred with fulvous and brown. Lower breast and belly, white. Sides of the body, white, barred with

wavy black lines. Wing coverts lavender grey : these give the bird its name—"blue-winged." Outer web of primaries, blackish ; inner web, drab : axillaries, white ; speculum, pale metallic green, with a broad white band above and below. Back and rump, dark brown.

Female—forehead and crown, brown ; sides of the head and neck and foreneck, pale grey, mottled with brown : chin and throat, pale grey. Mantle, back, rump, scapulars and upper-tail coverts and tail, dark brown. Belly, pale fulvous white ; sides of the body, brown ; axillaries, white ; speculum, brown, often tinged with green : no white eye band. It affects open water with plenty of floating weeds : it is seldom shy, but is a very swift and silent flyer and turns and twists far less than the common teal, but dives and swims better than that bird. Male—length, 16 inches ; wing, $7\frac{3}{4}$ inches ; tail, 3 inches. Female—length, 15 inches ; wing, $7\frac{1}{2}$ inches ; tail, 3 inches. Bill, dark brown, paler on the lower mandible : irides, brown : legs, greenish or slaty. Weight up to 1 lb.

THE FALCATED DUCK OR THE BRONZE CAPPED TEAL.

Eunetta falcata.—Indian name : *Kala sinkhur*, Oudh.

Habitat.—A rather rare bird in India, but it has been found in Lucknow, Bahawalpur, Jessore, Purnea, Manipur and Upper Burma.

Description.—Male—head, bright chestnut and green; mane-like crest, metallic green; under-tail coverts, black; white spot on the forehead; outer web of the secondaries, black glossed with green; axillaries, white; upper-wing coverts, grey. Speculum, black, tinged with bluish green. The female has the head and under-tail coverts, black, streaked with fulvous. Male—length, 20 inches; wing, 9½ inches; tail, 3¼ inches. Female—smaller. Bill, black; irides, brown; legs and feet, bluish. Weight up to 1½ lb.

THE WIGEON.

Mareca penelope.—Indian names: *Peesan*, *Patari*, *Thuria*, *Chota lal sir*. Hind.; *Parow*, Sind; *Cheyun*, Nepal; *Adla*, West Coast.

Habitat.—A fairly general cold weather visitor.

Description.—Male—forehead and crown, creamy buff; head and upper neck chestnut, with tiny black dots; chin and throat dusky. Mantle, back and scapulars, grey, pencilled with black; rump, grey. Breast, reddish, tinged with grey; lower breast and belly, white; sides of the body, black and grey; tail feathers, brown and ashy, margined with white. Outer web of the primaries, white; inner web, drab; axillaries, white, mottled with brown. Speculum, black and metallic green or entirely brown.

Female—forehead and crown, brown, barred with fulvous. Rest of the head, chin, throat and neck, fulvous, spotted and streaked with brown. Upper plumage and scapulars, brown; tail feathers, brown. Lower plumage, white; axillaries, white, mottled with brown; under-tail coverts streaked with brown; upper-wing coverts, brown. It is a rapid and noiseless flyer, and very shy, and when in flocks, is almost impossible of approach.

Length about 19 inches; wing, 10 inches; tail, 4 inches; bill, bluish with a black tip; irides, brown; legs and feet, greyish brown. Weight up to $1\frac{3}{4}$ lb.

THE PIN-TAIL.

Dafila acuta.—Indian names: *San*, *Sinkpar*, Hind.; *Kokarali*, *Drighush*, Sind; *Digonch*, Behar and Nepal; *Dighans*, Bengal; *Litunga*, Manipur; *Taubay*, Burma.

Habitat.—A winter visitor to every portion of the Indian Peninsula.

Description.—Male—head and foreneck, rich brown; hind neck, blackish; lower neck, breast, and upper belly, white; a white band from each side of the nape, down the side of the head to meet the white lower neck; lower belly, minutely spotted with brown; sides of the body, pencilled black and pale buff; rump, dark brown; middle tail feathers, black and long; axillaries, white, mottled with brown;

outer web of the primaries, blackish ; inner web, drab ; speculum, metallic bronze, with a cinnamon bar above and a black and white band below.

Female—resembles the male, but is of more sombre plumage, the speculum is brown, the under-tail coverts are marked with brown instead of being black, and the middle-tail feathers are not lengthened. It is very shy and its flight is extremely rapid. It is a night feeder. Male—length, 25 inches ; wing, 11 inches ; tail, $7\frac{1}{2}$ inches. Female—length, 21 inches ; wing, $9\frac{1}{2}$ inches ; tail, $4\frac{1}{2}$ inches. The bill is wider near the tip than at the base, and in the male is black with the sides of the upper mandibles blue ; in the female the bill is greyish black above, reddish brown below ; irides, brown ; legs and feet, slaty grey. Weight up to $2\frac{3}{4}$ lb.

THE GADWALL.

Chaulelasmus streperus.—Indian names : *Mila*, or *Mailta*, *Bhuar*, *Beykhur*, Hind. ; *Peeng hans*, Beng. ; *Burd*, Sind ; *Mail*, Nepal and Behar.

Habitat.—Found generally throughout India and is common in the United Provinces, Bengal, Assam, Manipur and Arrakan.

Description.—Male—crown and hinder part of the head, brown, rest of the head and neck, almost white, streaked with dark brown ; upper breast, white with large crescent-shaped brown bars ; lower breast, white ; upper abdomen, white ;

lower, ditto, crossed with brown bars. Sides of the body, barred with brown and pale fulvous; under-tail coverts, deep black; mantle and back, dark brown, pencilled with white; rump and upper-tail coverts, black; tail feathers, ashy brown. Outer web of primaries, blackish; inner web, drab; axillaries, white; speculum, brown, turning to black. Bill of uniform width throughout.

Female—crown and back of the head, streaked with black and fulvous; remainder of the head and neck, fulvous, streaked with black. Breast sides of the body and under-tail coverts, fulvous, spotted and streaked with brown; belly, white; mantle, back, upper-tail coverts, scapulars and rump, black; tail, brown. An excellent table bird; he gives good sport, is a quick riser, gets well away and flies faster than the mallard. Male—length 20 inches; wing, $10\frac{1}{2}$ inches; tail, $3\frac{1}{2}$ inches. Female—length, 19 inches; wing, $9\frac{1}{2}$ inches; tail, $3\frac{1}{2}$ inches. Bill of male, black; of female, orange brown, variegated with black; irides, brown; legs, orange or yellow, dirty-looking, with some black on the webs of the toes. Weight up to 2 lb.

THE SHOVELLER.

Spatula clypeata.—Indian names: *Tidari*, *Punara*, *Tokur-wallu*, *Ghira*, Hind.; *Alipat*, Sind; *Punta-mookhi*, Beng.; *Thobaha sankhar* (male), *Khikieria sankhar*, (female), Nepal; *Sukechoo*, Behar.

Habitat.—Generally distributed over India in the winter.

Description.—Easily distinguished from other ducks by having the bill twice as broad near the tip as at the base. A filthy feeder and almost unfit for the table ; it is particularly tame and confiding and difficult to drive from its haunts. It is partial to tanks and even village puddles ; it is a tolerable flyer and not particularly noisy. Male—length, 21 inches ; wing, $9\frac{1}{2}$ inches ; tail, $3\frac{1}{2}$ inches. Female—length, $18\frac{1}{2}$ inches ; wing, $8\frac{1}{2}$ inches ; tail, 3 inches. Bill, in males, is black with a greyish tinge ; in females, the upper mandible is brown, the lower dull orange ; irides, from yellow to deep orange ; feet, red. Weight nearly 2 lb.

THE MALLARD OR WILD DUCK.

Anas boschas.—Indian names : *Nilsir*, *Neroji*, Upper India ; *Lilgah* (male), *Lilgi* (female), Nepal.

Habitat.—A resident of Kashmir and parts of the Himalayas, and a winter visitor to the plains, especially in the Punjab and Sind, also Assam ; not so common elsewhere.

Description.—Male—entire head and neck, brilliant metallic green or purple, with a narrow white collar at the base ; and the breast a rich chestnut, which is

sufficient to distinguish the drake from other ducks. Female—has the head and neck streaked with black and fulvous ; upper plumage, dark brown or black, with tail feathers similar. The upper-wing coverts are brown ; the speculum, metallic purple between two double bands of black and white ; the entire lower plumage is fulvous, marked with brown. It is a night feeder and unwary when not much worried, a strong flyer, a gluttonous eater, an inveterate diver when wounded and very cunning at concealment. Male—length about 23 inches ; wing, 11 inches ; tail, 4 inches. Female—length about 21 inches ; wing, 10 inches ; tail, 3 $\frac{3}{4}$ inches. Bill, greenish yellow, with a blackish nail ; irides, brown ; legs, orange. Weight, 3 lb.

THE MARBLED DUCK.

Marmaronetta angustirostris.

Habitat.—A cold weather visitor to Northern India. A rare duck, except in Sind.

Description.—Male—head and neck are buff in tint, with a dark brown eye-patch ; rest of upper plumage, wings and tail are mottled with faded brown and cream chin, throat and neck, almost white ; breast, white, with greyish brown, and the same on the sides ; axillaries, white ; under-tail coverts, barred across.

Female—differs from the male in being smaller and duller in plumage, with a smaller crest and a less pronounced eye-patch. Male—length, 18 inches; wing, $8\frac{1}{2}$ inches; tail, $3\frac{1}{2}$ inches. Female—length, 16 inches; wing, $7\frac{1}{2}$ inches; tail, 3 inches. Bill, bluish grey, with a black tip; irides, brown; legs, greenish grey, with black webs. Weight up to 1½ lb. The bill and legs are the only parts of this duck of which the colour has not a faded appearance.

THE PINK-HEADED DUCK.

Rhodonessa caryophyllacea.—Indian names: *Lalsir*, *Golab sir*, Hind.; *Doomra*, Nepal, Terai and Tirhoot; *Saknal*, Beng.

Habitat.—United Provinces, Nepal, Tirhoot, Bengal, Assam and Orissa. Rare in the United Provinces.

Description.—The one point by which the adult male can be distinguished from all other ducks is the head, which, with the hind neck and sides of the neck, are rose-pink, while the chin, throat, and foreneck are dark brown. The female resembles the male, but is of duller colouring; the chin, throat and foreneck are faded pink. It prefers dense reeds, is gregarious and wary, and is an indifferent bird for the table.

Length about 23 inches; wing, 10 inches; tail, $3\frac{1}{2}$ inches; bill, pale red, irides, red; legs, slaty black. Weight, 2 lb.

THE RED-CRESTED POCHARD.

Netta rufina.—Indian name : *Lal choonch*, *Lalsir*, Hind. : *Rattoba*, Sind. *Doomer* (male). *Sauwa* (female). Nepal and Tirhoot; *Heroo hans* (male). *Chobua hans* (female). Beng.

Habitat.—Largely distributed over India in the winter and very common in Bengal.

Description.—Male—forehead brown, and crest cinnamon; sides of the head, chin, throat and neck, rich red chestnut; hind neck, black. Mantle, sides of the breast and lower plumage, dark brown. Each side of the body has a large white patch. Rump and upper-tail coverts, black; outer primaries, dark; inner primaries white or pale grey; axillaries, white. Bill, narrower at the tip than at the base; head, fully crested. The female somewhat resembles the male, but the lower plumage from the bill to the tail is dull white or pale grey, and the sides of the body are brown, with the back and upper-wing coverts and tail coverts, pale drab brown. It is a strong but heavy flyer and a rather slow riser; a troublesome bird to shoot;

a good diver and haunter of deep water with weedy bottom. Male—length, 21 inches; wing, $10\frac{1}{2}$ inches; tail, 3 inches. Female—length, 20 inches; wing, 10 inches; tail, $2\frac{3}{4}$ inches. Bill of male, bright crimson with a pink nail; bill of female, blackish, with tips and sides red; irides, bright brown; legs, yellow to orange, with dark webs. Weight, $2\frac{3}{4}$ lb.

THE POCHARD.

Nyroca ferina.—Indian names: *Boorar nur*, *Lalsir*, Hind.; *Rutubah*, Sind; *Choon*, Nepal; *Lallmurya*, Beng.; *Thordinguam*, Manipur.

Habitat.—A winter visitor to all parts of the Peninsula.

Description.—Male—with the exception of a white chin spot, the whole head and neck is rich chestnut. Mantle, black; breast, dark slaty brown; belly and sides of the body, pale grey with black pencillings, faint behind; under-tail coverts, black; back, scapulars and upper-wing coverts, grey, pencilled with black; rump and tail coverts, black; tail, grey freckled with black; outer primaries, ashy grey; axillaries, white. The female resembles the male, but is duller in plumage, while the head, neck and mantle are dull reddish brown, and the rump and upper-tail coverts are dark brown, speckled grey, and the tail is dark brown. It is a splendid

swimmer and diver, but a bad walker, a slow riser and an indifferent flyer. It frequents deep water in which it has to dive for its food. Male—length, 18 inches; wing, $8\frac{1}{4}$ inches; tail, $2\frac{1}{2}$ inches. Female—length, 17 inches; wing, 8 inches; tail, $2\frac{1}{4}$ inches. Bill, black at the base and tip, bluish in the middle; irides orange yellow; legs and feet, slaty grey. Weight, $2\frac{1}{4}$ lb.

THE WHITE-EYED POCHARD.

Nyroca ferruginea.—Indian names: *Karchiya*, *Bhoorar mada*, Hind.; *Baran*, Sind; *Malak*, Nepal, Terai; *Lalhiri*, *Bhootee hans*, Beng.

Habitat.—A common winter visitor: one of the commonest ducks in the United Provinces.

Description.—Male—head, neck, sides of the mantle and breast, deep chestnut, with a well-defined triangular white spot on the chin and a broad dark collar round the lower neck. Back, scapulars, rump and upper-tail coverts, blackish brown; tail, brown; upper-wing coverts, dark brown; sides of the body, dark chestnut; upper belly, white; lower belly, reddish brown pencilled; axillaries, white; outer primaries, much darker than the inner; under-tail coverts, pure white; bill of equal width throughout. The female resembles the male, but the head and neck are

reddish brown instead of chestnut, and there is no collar on the lower neck. It resembles the other pochards in its habits and is such a marvellous diver that it is useless pursuing it when wounded. Male—length, $16\frac{1}{2}$ inches; wing, 7 inches; tail, $2\frac{1}{4}$ inches. Female—length, 16 inches; wing, nearly 7 inches; tail, $2\frac{1}{4}$ inches. Bill, bluish black; irides, white; legs and feet, lead colour. Weight, $1\frac{1}{2}$ lb.

THE TUFTED DUCK.

Nyroca filigula.—Indian names: *Dubaru*, *Ablak*, *Radhooara*, Hind.; *Turando*, Sind; *Malah*, Nepal, Terai; *Nella chilloowa*, Tel.; *Mirbatho*, Tam.; *Nirkoli*, Can.

Habitat.—Generally throughout India in more or less abundance during the cold weather.

Description.—Male—head, breast and upper neck, black, with a metallic gloss; recumbent crest, black glossed with purple, back and shoulders black speckled with white; wings and tail, black; lower breast, belly, and sides of the body, axillaries and under-wing coverts, white; under-tail coverts, black. The female resembles the male except that the head and sides of the body are brown, and the other parts, which are black in the male, are in the female generally brown. The eye is golden yellow; hence sportsmen often mistake this bird for the golden-eyed (*clangula*

glaucion), a duck very rarely seen in India. The Golden-Eye may be recognised by a large round white patch on each cheek close to the bill in the male, and an imperfect white collar in the female. The Tufted Duck is fairly common in Northern and Central India in winter. It is a strong, smooth and easy flyer, dives well and remains submerged for surprising periods. Male—length about 17 inches; wing, 8 inches; tail, $2\frac{1}{2}$ inches. Female—length, $15\frac{1}{2}$ inches; wing, $7\frac{1}{2}$ inches; tail, 2 inches. Bill, bluish with black tip; irides, yellow; legs and feet, slaty blue with black webs. Weight, 2 lb.

THE GOOSANDER.

Merganser castor.—Indian name: *Arcethont*, Hind.

Habitat.—A permanent resident in the Himalayas and a winter visitor to the plains in the northern part of the Peninsula. Not common.

Description.—Male—head, small crest and upper neck, black, glossed with dark green. Lower neck, upper mantle, lower plumage, sides of the body, axillaries and wing coverts, white, sometimes faintly tinged with salmon pink. Lower part of the mantle and upper back, black; lower back, rump, upper-tail coverts, grey; outer web of the primaries, black; inner web, drab. Margins of the bill furnished with saw-like teeth (the chief difference from the true ducks), while the bill itself

is very narrow. The female has the chin and throat white and the head, crest and neck, chestnut brown. The whole upper plumage is grey, the whole lower plumage is white. It is an incessant diver both up and down stream and a voracious eater; its flesh is extremely rank and unpalatable. It haunts fresh water, close to forest. Male—length, 26 inches; wing, $11\frac{1}{2}$ inches; tail about 5 inches. Female—length, 24 inches; wing, $10\frac{1}{2}$ inches; tail, $4\frac{1}{2}$ inches. Bill, vermilion in both sexes; nail, black; irides, red; legs and feet, red. Weight, $3\frac{1}{4}$ lb.

THE SMEW.

Mergus albellus.—Indian name: *Neheune*, Hind.

Habitat.—The northern parts of the Peninsula in winter—not common.

Description.—It resembles the Goosander, having the bill furnished with saw-like teeth and following it in general outline; but the bill in both sexes is bluish grey with a whitish nail, the legs and feet being of the same colour. The male has white plumage, except for a good deal of black and brown in the wings, a black patch from the eye to the bill, black tip to crest, black back and some black bars on the sides of the breast. The female has the crown of the head rust coloured and has no bars on the sides of the breast. They are excellent flyers and very silent on the

wing. They swim and dive splendidly and are active, restless birds, being extremely rapid in their movements and feeding entirely under water. Male—length, $17\frac{1}{2}$ inches; wing, 8 inches; tail, $3\frac{1}{2}$ inches. Female—length, 16 inches; wing, $7\frac{1}{4}$ inches; tail, $3\frac{1}{4}$ inches. Bill, legs and feet, bluish grey; irides, red. Weight, $1\frac{3}{4}$ lb.

THE WOODCOCK.

Scolopax rusticola.—Indian names; *Sim tectur*, *Tutatur*, Hind.; *Chamun*, Kangra; *Chinjarol*, Chamba; *Sham tectur*, *Sham pookra*, Kumaon; *Kangtrak*, Manipur; *Belatee chahu*, Beng. and Chittagong.

Habitat.—The Himalayas in summer, the hills of Southern India in winter.

Description.—Too well known to need any, while the plumage is too variegated to admit of minute description. But it may be noted that the bill is straight, the terminal half being pitted. The primaries are notched with rufous on the margins of both webs. There are cross bars on the hinder part of the crown. Tail feathers soft, broad and black, with the tips on the underside silvery white. The sexes are alike. It is generally found singly or in pairs, although they may be met with in good numbers not far from each other. In India this bird is tame and confiding and affords tolerably easy shots. It is a night-feeder, prefers running water and oak

woods. The little pointed feather of the woodcock's wing, much prized of painters, is the outermost primary covert.

Length, about 14 inches; wing, $7\frac{1}{4}$ inches; tail, 3 inches; bill from gape, up to 3·3 inches. Bill, dark brown; irides, brown; legs and feet, slaty grey. Weight not exceeding 12 oz. Tail of twelve ordinary feathers.

THE WOOD SNIPE.

Gallinago nemoricola.—Indian name: *Bunchaha*, Nepal.

Habitat.—The Himalayas all the year, the Eastern Terai in winter.

Description.—Sexes alike. Forehead and crown, deep black, with a pale buff, longitudinal streak down the middle of the crown. A whitish band over the eye; a black band from the eye to the bill; chin, white; throat, sides of the head, whitish with blackish spots and streaks; neck, buff, blotched with black. Back, black; primaries, plain; inner scapulars, black, with a buff margin; rump, dark brown, barred with white; lower part and upper-tail coverts, rufous, barred with brown. Middle-tail feathers black, terminated with chestnut, a wavy black bar and a whitish tip. The lateral feathers are ashy, barred with brown and tipped white; chest and breast, fulvous, mottled with black; sides of the body, fulvous, barred with black.

Belly and thighs, dull white, barred brown : under-tail coverts, fulvous and white, barred brown. Eighteen tail feathers, the six middle ones soft and broad, the outer ones stiffer, diminishing in width and length.

Length, 12 inches : wing, $5\frac{1}{2}$ inches : tail, 2 inches : bill, $2\frac{1}{2}$ inches. Bill, brown : irides, brown ; legs, slaty green. Weight, 6 oz.

THE SOLITARY SNIPE.

Gallinago solitaria.—Indian name : *Chaba* (general Hindustani name for all Snipe).

Habitat.—The Himalayas, from Kashmir to Assam.

Description.—This snipe differs from the wood snipe, in having the upper plumage delicately marked and cross-barred throughout, the pale markings being nearly white : and there are none of the large black patches on the back and scapulars which characterise the wood snipe. It does not affect cover and may often be seen on the margins of streams and pools, and its flight is precisely like that of the pin-tail snipe, though less rapid. Sexes alike.

Length, $12\frac{1}{2}$ inches : wing, $6\frac{1}{4}$ inches : tail, $2\frac{1}{2}$ inches ; bill, $2\frac{1}{2}$ inches. Bill, yellowish brown, and black at the tip : irides, brown ; legs and feet, olive. Weight

up to 8 oz. The tail feathers vary in number from 16 to 28; the middle eight are broad and soft and the outer ones narrow, short and stiff.

THE COMMON, FULL OR FAN-TAIL SNIPE.

Gallinago celestis.—Indian names: *Chaha*, Hind.; *Bharka*, *Bharak*, Nepal; *Chenga puki* ("cshuaap"), Beng.; *Tibud*, *Panlowa*, Mahr.; *Ulan*, Tam.; *Mukuparedi*, Tel.; *Chenga*, Ooriya; *Cherayga*, Assam; *Chek Londi*, Manipur; *Mayawool*, Burma.

Habitat.—A winter visitor to the entire Indian Peninsula.

Description.—Sexes alike, and too common to need detailed description. It closely resembles the pin-tail except that the outer web of the first primary is white instead of brown, and it has white margins to the tips of the outer secondaries, which the pin-tail often has not, and all the tail feathers are soft and broad; they number fourteen (sometimes sixteen), and the laterals are not narrow nor stiff.

Length, up to $12\frac{1}{2}$ inches; wing, $5\frac{1}{2}$ inches; tail, $2\frac{1}{4}$ inches; bill, $2\frac{3}{4}$ inches. Bill, greenish brown, darker towards the tip; irides, brown; legs and feet, brownish green. Weight, $4\frac{1}{4}$ oz.

THE PIN-TAIL SNIPE.

Callipepla tenuirostris.—Indian names, same as those of the common snipe.

Habitat.—Same as that of the common snipe.

Description.—Sexes alike. It closely resembles the common snipe save in the differences noted in describing the last-named bird, while the outer-tail feathers are extremely narrow and stiff, and the bill is generally shorter and not so wide at the tip. The bird is lighter than the common snipe. It usually has 26 tail feathers.

THE JACK SNIPE.

Callipepla gallicaudata.—Indian names same as those for other snipe.

Habitat.—Throughout India in winter.

Description.—Sexes alike. The bird generally resembles the common snipe, but it has no longitudinal pale band on the crown. The tail is composed of twelve ordinary soft feathers, rather narrow and pointed. It is much smaller than the common snipe and pin-tail, the length being $8\frac{1}{2}$ inches; wing, $4\frac{1}{2}$ inches; tail, 2 inches; bill, $1\frac{1}{2}$ inches. Weight, $2\frac{1}{2}$ oz. Bill, horn colour, black at the tip; irides, brown; legs and toes, pale olive green. It is rather solitary in its habits, lies very

close, seldom utters a note, flies a short distance and drops suddenly. It is considered the best eating of all the tribe.

THE PAINTED SNIPE.

Rostratula capensis.—Indian names: *Ohari*, Nepal; *Kone*, *Konchata*, Sonthal; *Baggarji*, Beng.; *Tibud*, *Panlawa*. West Coast: *Mailulan*, Tam.

Habitat.—The entire Indian Peninsula: a permanent resident.

Description.—Male—a broad buff band from the forehead to the back of the head, margined with a black band mottled with white and followed by another band of dark brown. Buff ring round the eye. From this ring a short buff stripe runs behind the eye. Hind neck, ashy brown, barred with black. Scapulars, ashy brown, blotched with black; rump, grey, barred with narrow black lines and slightly mottled with white. The tail feathers, fourteen in number, are bluish, with narrow wavy black bars and broad buff bands. Primaries and outer secondaries, bluish grey, marbled with black and white on the inner web, and black and buff spots and blotches on the outer web. Inner secondaries, olive brown, marked with black. Sides of the head and throat, brown; chin, white; a dark gorget. Lower plumage, pure white. The bill is curved slightly downwards towards the tip. The female is the more showy bird and differs from the male in the following respects:

circle round the eye and stripe, white. The whole of the closed wing is olive green, barred with black ; sides of the face, throat, foreneck, and a broad collar round the neck are chestnut. But the chief difference lies in the female having the outermost scapular feathers very narrow, pointed and pure white. It is generally found on marshy ground where there is much grass. It is a miserable flyer, settles quickly and seems more intent on displaying its plumage than on getting away, but when it has settled it is not easy to flush again.

Length, 10 inches ; wing, 5 inches ; tail, $1\frac{1}{2}$ inches ; bill, $1\frac{3}{4}$ inches ; legs and bill, olive brown ; irides, brown. Weight, $6\frac{1}{2}$ oz.

THE RIVER SPORTING FISH.

THE MAHSEER.

Barbus tor or *Barbus mosal*.—Indian names : *Mahseer*, *Mahaseer* or *Mahasaula* and *Naharm*, Hind. ; *Jungapoetia*, *Burapatra*, Assam ; *Poo-Meen-Candee*, Tam. ; *Kukhiak*, Punjab ; *Joongah*, *Betiah*, *Kurreeah*, Sind ; *Kurcha*, 'Kurku' ; *Kurchee*, Gond.

Habitat.—Generally throughout India in rapid streams and deep pools not far from hilly regions.

Description.—Family *Cyprinidæ*. No teeth in any part of their mouth, the only teeth being situated on a pair of bones in the throat, just below the gill cover. No adipose fin, body covered with scales, head naked. Mouth frequently with barbels. Dorsal ray, bony and strong. Twenty-five to twenty-seven scales along the lateral line, not more than two rows between it and the ventral fin. Head

contained $3\frac{1}{2}$ to $3\frac{3}{4}$ times in the total length. Weight up to 80 or 100 lb. and sometimes more.

He may be fished for with dead bait, spoon, phantom, fly gram, live-bait or paste. Also there are the Dee Minnow, Coxon's Spinner, the Archer Spinner, and the Chapman Spinner and spoons of all sizes. Among flies the Blackamoor, the Cock-o'-the-Walk, and the Smoky Dun: the parched gram or *churna* is threaded on the hooks through holes drilled in the grain, just big enough to take the gut and shank. Live-bait (of any size up to half a pound in weight) used with Colonel Parson's flight of hooks or the Jardine tackle; paste of almost any sort made of bread, flour, ragee or atta, scented, or unscented, fowls' entrails or crabs are handy when all else fail or when other lures are unprocurable.

There are fifty-six varieties of this family (*Cyprinidæ*) distinguished by having two barbels, one barbel, or no barbels at all, distributed throughout India, and all answering to the generic name of *Barbus*.

THE CHILWA.

Chela argenta or *Ghelagora*.—Indian names: *Vellachi*, Tam. and Can.; *Bay ree-saie*, Tel.; *Boonchpootie*, Bengal and Orissa; *Took*, Punjab; *Chellhul* and *Chela* or *Chilwa*, Hind.; *Dundia*, Kurku; *Dundie*, Gond,

Habitat.—Throughout the Indian rivers and very common.

Description.—Bright silvery fish, long in the body, with small head and up-turned mouth, the dorsal fin being placed very far back. Pectoral fins very long. No spine to the dorsal fin. Seven rays in the ventral fin. Abdomen compressed, forming a sharp ridge. Very flat sides. Dorsal fin contains nine or ten rays. The anal varies in length. A surface feeder, a ready taker of the fly and a remarkably good eating fish. They thrive in still water and affect the still pools in rivers, the majority run from six to nine inches in length, though some kinds run to but $2\frac{1}{2}$ inches. A trout rod, three flies and a short line is the ticket. There are twelve varieties of the genus *Chela*.

THE BLACK SPOT.

Barbus filamentosus or *Barbus mahccola*.—Indian names, same as for the Mahseer.

Habitat.—Southern and Western India.

Description.—Length, 6 inches. No barbels. Body strongly compressed. Rays of the dorsal fin extended into long filaments. Caudal fin red, tipped with black. Lateral line complete. Dark spot on one lateral line near the tail. Weight,

5 or 6 to the pound. They rise greedily to any dun, purple or black fly and require a small hook. They swim in shoals. A curious change occurs in this fish immediately after death, the whole body becoming scarlet.

THE INDIAN TROUT.

Barilius bola or *Bola goha*.—Indian names: *Aart candee*, Tam.; *Bugguah*, Ooriya; *Korang*, Assam; *Bola*, Bengal; *Pahtah*, Punjab; *Chagunee*, Behar.

Habitat.—Throughout India.

Description.—Length from 4 to 12 inches; short dorsal fin. Wide mouth opening forwards. No barbels. Ten dorsal rays; ten anal rays; scales about 90. Fins orange, caudal fin edged with black. Colour, silvery with irregular greenish spots on the sides, reminding one strongly of a trout. Weight from $\frac{3}{4}$ lb. to 2 lb. It takes the fly and small spinning bait, especially a white moth and small phantom. It is shy and feeds best towards evening. It will sometimes take paste, and is a real good little sporting fish.

The lesser Barils, of which there are 18 varieties, found in most of the Indian rivers, are nearly all distinguished by silver body and green spots. They are very game and rise to a fly like a trout. Of active habit, they prefer brisk streams among rocks and are usually found in Mahseer rivers or those frequented by the Black

Spot. They do not run to more than 4 oz. The small black trout fly on a No. 000 sneck or kirby, is very useful.

THE FRESH WATER SHARK OR BOALLI.

Wallago attu.—Indian names: *Boal* or *Pangash*, Beng.; *Moinsia Boal*, Oriya; *Vale* or *Vahlah*, Tam.; *Gwabi* or *Mulle*, Punjab; *Bawal*, Hind.; *Latchi* and *Bawari*, Tirhoot; *Bawali*, Assam; *Poilee*, Sind; *Pavdom*, Kurku; *Paran*, Gond.
Habitat.—A tank and river shark found throughout India.

Description.—Length anything up to 6 feet. A voracious and filthy feeder, a river scavenger, but a good fish to eat and much in request among low Mahomedans. Anal rays 86 to 93. Maxillary barbels nearly twice the length of the head. Pectoral spine feeble, not serrated exteriorly. Lower jaw prominent, anal and caudal fins confluent, the latter forked. This fish will take a dead bait on a gorge hook, or live bait, such as used for Mahseer. Use wire traces, have a gaff and disgorger handy, and beware of his terrible jaws when removing hooks.

THE GOONCH.

Bagarius yarrelli.—Indian names: *Goonch*, Hind.; *Sahlan*, Oriya; *Goonch*, Punjab.

Habitat.—The large rivers of India and sometimes in tanks.

Description.—A finny monster attaining a length of 6 feet and weight of over 250 lb. Extremely ugly with lurid colours. Anal rays 15, maxillary barbel very broad at the base, extending beyond the end of the head. Dorsal, pectoral and caudal fins produced into long filaments. Body, brown, sometimes with a purplish tinge with irregular broad crossbands. Its flesh is yellow and esteemed by the natives. The tackle may be the same as dressed for Mahseer on wire gimp unless a short shrift is intended when a good stout cord may be used. It feeds from dusk till two hours after and from dawn till about 8 o'clock; the best bait is the bahm or spiny eel.

THE SILOND.

Silondia gangetica.—Indian names : *Silond*, Hind. ; *Pangash*, Beng. ; *Wanjon*, Tel.

Habitat.—The larger rivers and estuaries.

Description.—A very large fish of the fresh water shark type attaining 6 feet in length, colour silvery, fins stained with grey, two short barbels. Adipose fin very short, dorsal short with a spine. Scaleless. The best bait is a spoon or fish, or any filth; but it will take a fly. It is a magnificent fighter and a muck eater of the most virulent type.

THE TENGARA.

Macrones seenghala or *M. tengara*.—Indian names: *Tengra*, Hind.; *Alli* or *Aldi*, Ooriya; *Goontea*, Beng.; *Guree*, Malabar; *Kutla*, Tam.; *Kutukhugger*, Punjab; *Kagur Singharee*, North-West Provinces; *Kanya Tengara*, East Beng.; *Kors*, Assam.

Habitat.—Throughout India.

Description.—Anterior and posterior nostrils separate, the latter having a pair of barbels. Adipose fin long. Ten anal rays. Dorsal spine smooth. Four dark bands along the side and a black mark above the pectoral fin. Length, 6 inches. Eight barbels, the maxillary barbels extending to the caudal fin. There are 18 varieties of *Macrones* ranging in length from 2 inches (*M. Nangra*) to 2 or 3 feet (*M. Aor* and *M. Lamarri*). They are to be caught with live-bait. Good eating.

THE CHETUL OR SEETUL.

Notopterus chitala.—Indian names: *Chetla*, Beng.; *Ambutan-wallah*, Tam.; *Seetul* or *Chetul*, Hind.; *Gundum*, Sind; *Moh* or *Mohi*, Punjab; *Chitol*, Ooriya; *Bunnih*, Tirhoot.

Habitat.—Throughout the Indian rivers and tanks.

Description.—A bright silvery fish with a very bowed back and an almost straight abdomen. Body much compressed. Scales very small. Lateral line distinct. Abdomen with a double serrature. Upper profile of the head concave. Narrow bands of small teeth on both jaws; two series of teeth on the tongue. Anal fin very long, and united with the caudal; dorsal fin very short. Ventral fins wanting. Dorsal rays 8 to 10; anal, 110 to 125; scales, 180. This fish is sometimes marked with dark crossbands on the back, and with round black ocellated spots along the lower part of the tail. Its mouth is remarkably small, and it is best taken by slow spinning and constant waits on the bottom, and using a sensitive rod, for it is a very gentle nibbler. It runs from a few inches in length up to nearly 4 feet, and has a peculiar habit of rolling over and over on the surface of the water and jumping clean out of it towards evening.

THE BUTCHWA AND THE CHERKI.

Pseudeutropius garua and *P. murius*.—Indian names: *Butchwa*, Hind.; *Battuli* or *Bopotassi*, Ooriya; *Bikree*, Oudh; *Chellee* or *Puttul*, Punjab; *Dhonga Nu*, Sind; *Nahkelleetee*, Tam.

Habitat.—Throughout India.

Description.—These two fishes are so much alike that it is extremely difficult to distinguish between them. They belong to a genus of which there are eight varieties, and their characteristics are as follows:—Length from 4 to 12 inches. Very small adipose fin; dorsal fin short, with a spine. Barbels eight. Dorsal and pectoral spines serrated. Eye situated behind the angle of the mouth, and even partly on the lower surface of the head. They may be taken with an orange or black trout fly on a No. 9 Limerick. They require a big hook as they are rather good at getting off. They can be taken also with a small spoon, and as the fishing is generally at the surface, no sinker is required with a spinning bait. Spin in rough water against stream, and examine the gut after catching half a dozen, as their teeth are very sharp.

THE AMVARI.

Mugil corsula.—Indian names: *Anwarie* or *Bhoondur*. Hind. ; *Corsola* or *Ullah*, Beng. ; *Corsola*, Tirhoot ; *Undala*, United Provinces.

Habitat.—Bengal and North-West Provinces.

Description.—Length up to a foot. It is a small fresh-water mullet with 49 to 50 scales. Its head rises higher than the back; the eyes are protuberant; there are rows of dark dots on the sides. It swims in small shoals, the eyes only showing

above water; and, as it takes no kind of bait, it must be shot with small shot, a boat being handy to retrieve it as it is apt to sink immediately it is killed. The natives spear it. It is one of the most delicious of Indian fish, and should be cooked as soon as possible after it leaves the water. It is excellent smoked.

THE PUFTA.

Callichrons bimaculatus.—Indian names: *Pufta* or *Pursa*, Hind. and Beng.

Habitat.—Throughout India.

Description.—Length up to 10 inches. No adipose fin; dorsal very short. Barbels four. Lower jaw projects beyond the upper. Eye behind and partly below the cleft of the mouth. There are eight varieties of the Pufta, most of them good fly takers. It is a rich, fine flavoured fish.

THE MURRUL.

Opheocephalus marulius.—Indian names: *Murrul*, Hind.; *Bora*, Bhutan; *Sourlee*, Ooriya; *Bhangon*, Beng.; *Charkoor*, Sind; *Choaree Veral*, *Burra Chung* or *Hal much*, Assam; *Cooraru*, Mal.; *Dowlah* and *Kubrah*, Punjab; *Hoovina* and *Murrul*, Can.; *Poola Chapa*, Tel.; *Seulie*, Kurku; *Samal*, Gond.

Habitat.—Throughout India ; a predaceous fresh-water fish.

Description.—There are eight varieties of this snake-headed fish which grows

up to 3 or 4 feet. It varies much in colour, but there is always an eye-like spot on the caudal fin in adult specimens of the true murul, and five large irregular dark marks along the side below the lateral line. *O. punctatus* is of a dirty green colour with dark stripes and bars not unlike *O. gachua*. *O. barca* is dark green above with yellow sides, the body thickly covered with irregular red and black spots (very common in Bengal and good eating), while *O. striatus* is dark grey above with dark bands down the body. It exists for a long time out of water. It is long in shape, large of mouth, head and body covered with scale. Long dorsal and anal fins, without any spines, teeth in the jaws, and on the palate. It is found in tanks, also in rivers. Its habits are something like those of the pike, but it is a bad fighter and hores to the bottom. When caught, beware of its teeth. It feeds morning and evening and is rather shy. It may be spun for with Mahseer bait and tackle ; it is partial to frogs, but will take paste-bait when hungry, especially in tanks.

THE ESTUARIAL SPORTING FISH.

THE BAMEEN.

Polynemus tetradactylus. Indian name : *Bameen*.

Habitat.—The tidal backwaters and estuaries on both Indian coasts.

Description.—A strong, hard mouthed fish requiring stout tackle and a wire gimp trace. It attains to 6 feet and upwards in length, and sometimes exceeds 300 lb. in weight. It is excellent eating. It ascends higher up the rivers than most estuarial fish. It takes a fly such as is used for Bass, but will take dead bait, meat, a spoon, etc., and a piece of red rag. It is a good fighter.

P. indicus is found in the same waters, but it seldom exceeds 4 feet in length and but rarely above 20 lb. in weight.

THE BECKTIE.

Lates calcarifer.—Indian names : *Beektie*, Hind. and Beng. ; *Kaulanji* and *Madavu*, Can. (The Nair fish of Europeans in S. India) ; *Dungara*, Sind ; *Paddee Neem* or *Nair-Neem*, Mal. ; *Koduwu*, Tam. ; *Bandukopa* or *Bondu-Mekum*, Tel. ; *Bhekkut*, Ooriya.

Habitat.—The estuaries of the Indian rivers.

Description.—The salt water beektie runs from 12 lb. to 60 lb. in weight, and is often found in company with a bameen. It is silvery, with a bronzy sheen on the back. The adults assume a humped back. Stout tackle, such as used for the fresh-water shark or the Mahseer, with a larger bait, is recommended. They take best in discoloured water, feeding at night on the flood tide, and give good play. They require slow spinning, as they are "picksome" biters. The best time for day work is during the monsoon when the waters are thick, at other times at night.

THE GREY PERCH AND RED PERCH.

Chrysophrys berda and *Lutianus roseus*.—Indian name : *Kembari*, Can.

Habitat.—The Indian estuaries.

Description.—Very similar to the English sea perch, running up to 5 lb. in weight. It is very partial to a prawn bait ; the tackle should be dressed on No. 4/10 wire gimp.

THE MEGALOPS.

Megalops cyprinoides. Indian names: *Punnihowa* and *Nahan*, Ooriya; *Kurmi*, Malabar; *Moran Kund*, Tam.; *Nagatan-youet*, Burma.

Habitat.—The estuaries and tanks near the coasts.

Description.—Projecting lower jaw. Abdomen flat, not trenchant. A narrow bony plate between the mandibles. Scales large and firmly attached. Bands of villiform teeth on the jaws. Dorsal rays, 17 to 20; anal, 24 to 27; scales, 37 to 42. They are about the same size as mackerel, and seem always hungry. They may be taken with dead bait and a float, or with a May fly or Carnatic carp fly. They are predaceous and not good eating.

THE SEER FISH.

Indian name: *Seer*.

Habitat.—The Indian estuaries.

Description.—This is more properly a sea-fish, though it is found in our estuaries. It runs up to 60 lb. in weight, quite an average bazar fish weighing from 15 lb. to 20 lb. Excellent eating, and is taken in the same way as the bameen and the beektie.

THE TANK SPORTING FISH.

THE CUTLA.

Cutla buchananii.—Indian names : *Cutla*, Hind. and Beng. ; *Boassa*, United Provinces ; *Botchee*, Tel. ; *Taila*, Punjab ; *Tambra*, Bombay.

Habitat.—Tanks throughout India. It is represented by a single species.

Description.—A carp-like fish which attains a very large size, sometimes nearly 100 lb. It has a very large head, the length of which is contained three times in the total. The snout is broad, and the mouth turned upwards. There is no upper lip. It grows quickly, and is wholesome but coarse food, though much esteemed by Bengalis.

It is a bottom feeder, and gives tolerable play. Like most tank fish, it is a shy and gentle nibbler when it does nibble. It is fished for with every sort of paste

bait—flour, atta, rice flour, gram flour, chappaties, kaju nut and boiled rice, bread, etc., mixed with rotten cheese, aniseed, ghee, honey, and other scented or evil-smelling ingredients. In fishing, the bait *must* rest on the bottom of the tank, so it is essential that the bottom in front of the fisherman and for a good space around should be absolutely cleared of all weeds and grass. But real success in angling for this fish is only possible by adopting the Bengali *arah* method, which few Europeans care for. It means foul-hooking with naked hooks and is rather a complicated and tiresome process. Liberal ground baiting is necessary, and there are innumerable and highly-vaunted Indian nostrums in this connection. Here are a few of the ingredients of ground bait used for this and all tank fish :—bran, rice dust (*chowh ka coora*), fried oilcake (*khulli*), *methie*, *jeera*, *mungaila*, *tuj*, aniseed, rotten cheese and the lees of country liquor—all of which can be had in the local bazaars. A selection of these is pounded, and mixed with mud into balls. Besides paste the Rohu and other tank fish will take the grubs of wasps and bees, maggots, worms (occasionally) and pieces of raw prawn. A single stiff bamboo rod and winch with country-made tusser line, the special hooks for Rohu (now generally imported) or the country-made hooks (the best), peacock quill float attached in the native style, is the tackle required. Quick striking is essential. A strong *machan*, built at least 10 feet from the bank, is conducive to comfort and success. No landing net or gaff is required; any fish from 5 lb. upwards when brought in to the bank may be safely landed by

a native simply placing his hands under the fish which will allow itself to be carried many yards in shore without the slightest struggle. Tank anglers are pestered by those inveterate bait stealers, prawns and crabs. A good tip is to tie a large quantity of fowls' entrails to a brick or stone, passing the string several times round the entrails and leaving about a foot of string between them and the brick. This, thrown in a few feet from the water's edge and about 6 feet on either side of the float, will keep these pests busy most of the day. A few handfuls of *dal* thrown around the bait are useful in keeping away crabs. To be a successful tank angler in India one must discard all knowledge of bottom fishing as practised in England, and unreservedly adopt Indian methods.

THE ROHU.

Labeo rohita.—Indian names : *Rohu* and *Roe*, Hind. and Beng.

Habitat.—One of the commonest Indian tank fish ; also found in rivers.

Description.—Length up to 3½ feet. Deep in form, narrowing rather suddenly to the tail, usually two barbels only. Scales, 41 ; dorsal rays, 16. Lips fringed, fins tinted red. There are several varieties as in all much domesticated fish. It is good eating when not too large. Its habits and the methods of capturing it are the same as those of the *Cutla* ; but *arah* fishing for it is hardly ever practised.

THE CALBOSE OR KALA-BANS.

Labeo calbasu.—Indian names : *Kalbeshe*, Beng. ; *Calabans*, Hind. ; *Culotee*, Central Provinces ; *Kunda*, N. Beng. ; *Nullagundu Menoo*, Tel.

Habitat.—Throughout India.

Description.—A very common fish, dark in colour, generally blotchy, and very shiny, lips fringed. Excellent eating.

Baits, tackle and method of fishing same as for Rohu.

THE MIRGIL.

Tirrhina mrigala.—Indian names : *Mirgil*, Hind. and Beng. ; *Morukkee*, Sind ; *Naim*, North-West Provinces ; *Mori*, Punjab.

Habitat.—Hindustan generally.

Description.—A fine good-looking fish with bright golden or silvery scales, and good eating, though bony. It attains a weight of 20 lb. and gives very good play, a 10-lb. Mirgil showing as good a fight as a Rohu twice that weight.

Bait, tackle and methods of fishing same as for Rohu.

SEASONS FOR FISHING.

BENGAL, TIRHOOT AND ASSAM.—Mahseer and other river fish from 1st July to 15th November ; September and October being the best months.

THE PUNJAB.—From 1st April to end of October.

MADRAS.—March to October, with May and June for preference.

BOMBAY.—Same as Madras.

TANK FISHING, throughout India, during the hot months, from April to September.

CARE OF FISHING TACKLE.

The Rod.—A well-made split bamboo or wood rod should last for years if proper care is taken of it. Each joint, after a day's fishing, should be wiped dry very carefully and bent into shape, if it has a set, before putting away ; and a drop or two of linseed oil should be rubbed over the rod before going out again with it. When laying aside a rod for the season, it should be carefully examined and all damages repaired ; the ferrules and bands should be thoroughly cleaned and new plugs fitted to the joints. Take the rod apart, wipe the joints dry, and lay them away in their case in an apartment where the temperature will be dry and uniform. If a case is

used, do not tie the strings or bands too tightly; this is likely to bend the tip and second joints. Under no circumstances let the rod stand near a fire, and the other extreme of cold in an outbuilding should be avoided. Changes of temperature destroy the pliancy and stiffness of a rod. To insure the continued equal distribution of strength the rod should be laid flat on the floor or a shelf, instead of being stood on end in a corner, and under no condition should it be left jointed and hung on a peg. But, after all, the best rod for tank angling is a single made bamboo fitted with snake rings. These can be had almost anywhere, are cheap and lasting while ensuring the quick striking essential to secure all tank fish.

The Reel.—Should be taken apart, thoroughly cleaned, and then oiled slightly. Put the parts together, and place the reel in a dry drawer, or cupboard of moderate temperature.

Lines.—All lines should be reeled off and stretched from end to end on a sunny morning and left in the air for a few hours. They should then be overrun lightly with a bit of woollen cloth or chamois to remove any taint of mildew or other matter, and then be wound upon the reel, but not too tightly. If frayed portions are discovered, the line should be condemned and the good parts kept for miscellaneous uses.

Leaders.—Will keep for years if laid away in a dark place, where it is not too warm or too damp, but they should be tested before using.

Flies.—The best thing to keep flies in is a pasteboard box tightly and closely wrapped in oiled paper. They will then need no moth preventive.

Fly-hooks.—Should be perfectly dry and wrapped tightly in wax-cloth.

Hooks.—Do not stick their points in cork and stow them away, for if the atmosphere is slightly damp, or the cork not absolutely dry, rust will occur. The best plan is to wrap the hooks in oiled paper before putting them away. Bait-boxes and creels should be thoroughly cleansed with warm soda-water, and, when dried, it is well to sprinkle them with a little carbolic acid, or a wash of carbolic acid soap can be used.

CAMP EQUIPMENT.

It is quite beyond the scope of this little book to enter into an exhaustive review of the many matters embraced in the title of this chapter. So much depends on the money laid out, on the conditions, seasons, and places in which one makes camp. So that it must be left to the individual to decide what shall be taken and what shall be left behind—the far more important consideration! But whether our shikar partakes of the nature of the glorified viceregal shoot, or whether we have to content ourselves with the humble week-end outing after snipe and small game, there are certain things necessary to our reasonable comfort and convenience, which it is as well to bear in mind, and to which end this chapter aspires to be an *aide-mémoire*.

Tents.

The Kabul tent with its double-fly, making it equally suitable for hot or cold climates, is generally acknowledged to be the best for shikar purposes, where

transport is limited, and lightness is a desideratum. The officers' 80 lb. light field service tent may be had in two sizes—8 × 10 feet and 8 × 8 feet, and may be supplemented by extras in the shape of bath-room and verandah.

Government pattern, 8 × 14 feet, weight, 80 lb., answers very well; as also the double-fly Native Officers' tent, similar in appearance to the Kabul pal, but with lower poles 6 × 6 feet, weight, 60 lb. These should answer all purposes for a single individual.

Willesden canvas paulins are widely used in Burma instead of tents. These paulins (16 × 10 is the most convenient size) are portable, quicker put up and more airy than tents: if you have elephant or cart transport they can be used to cover the kit.

For servants there are several good tents, such as the *Tente d'Abri*, which is composed of a single-fly of stout drill, dyed khaki or tan, 8 × 7 feet, 20 lb., and 7 × 6½ feet, 16 lb., or the ordinary servants' pal which ranges from 20 lb. to 2½ maunds, in six sizes, from 6 feet square to 15 feet square inside. Ground sheets of Willesden canvas are most comfortable and protective when the ground is damp, and are useful coverings during wet weather.

Tents for the Himalayas.—A light double-fly tent of tanned canvas, or green Willesden canvas, 7 feet square both flies to peg to ground, with jointed poles and

cross pole, can be made under 60 lb. in weight; *one man's load*. A chick should be made to fit the front, and the back need have no entrance. A small window is useful at the back. Outer fly, 7 feet high, inner 6 feet 6 inches. *A servant's tent* can be single-fly, of waterproof canvas, lined with blanket stuff. Size about 7 feet square with a waterproof ground sheet. *A small Tente d'Abri* should also be taken for a "flying camp."

Waterproof sheets, 7 × 7, with eyelet holes all round, are very necessary; and a common umbrella or two will often be found useful.

I have found the tents manufactured by the Elgin Mills Company, Cawnpore, to be most satisfactory in every way, and they cater specially for the Indian sportsman. *Verb. sap.*

Camp Furniture.

Beds.—There are many excellent patent beds which combine all the qualities necessary for this item. I cannot attempt to recommend any, seeing that ideas of comfort vary; but it would be as well, before deciding on any of these patents, to consider their ability as weight carriers; for a heavy man will find the somewhat primitive arrangement of four legs, four poles and canvas or leather infinitely preferable to some of the "waistcoat pocket" arrangements now on the market.

Bedding.—Whatever bedding is carried, a waterproof sheet or a waterproof valise is a *sine qua non*; also a mosquito net of ordinary mesh and one of *mull mull* when sandflies are about.

Sleeping bags and valises of various designs and makes, such as the Wolseley, are extremely useful in hill work, and when on the march, may be used as receptacles for various bath and toilet requisites. Of course on occasions a bed of dry bracken or the young branches of the pine piled a foot high is not to be despised for its softness, elasticity and fragrance. A *seetulputte* mat to sleep on is a cool and comfortable accessory for the hot weather.

Bath, basin and bucket, etc.—Can be well made out of green Willesden canvas, which is both water and rot-proof. A wide strap fitted with hooks and buckled round the tentpole, makes a good clothes-horse.

Boxes.—Mule-trunks, 2 feet long \times 1 foot wide, and 15 inches high, are handy, and form an ordinary cooly load; yak-dans of leather, 22 inches long \times 14 inches wide \times 14 inches high, are also recommended for hill work. Messrs. Eroom & Co. of Calcutta make, I believe, a patent combination, of yak-dan and bed on the Kinloch principle, which is worth consideration. Yak-dans and mule-trunks may be procured at Cawnpore, Peshawar, and other centres. In the plains and hills, baskets covered with leather are excellent for carrying camp kit and stores, and in the hills the common *kitta*.

Folding tables, chairs, stools, wash-stands and other gear, their name is legion, many are excellent, others are best left alone. Those which exhibit a combination of light wooden slats and iron supports on the girder principle are, as far as my experience goes, cheap and good.

Lamps.—Nowadays there are so many good camp lanterns and lamps that it is quite impossible to assist the sportsman in making a choice. But where oil can be obtained nothing, I think, has yet eclipsed Orr's patent camp lantern (P. Orr & Sons, Madras). Under other circumstances a good candle lamp, of which there are many, is the most satisfactory. Then there are many kinds of electric torches and lamps which occupy the minimum of space.

Cooking utensils.—The desire to cater specially for the sportsman has placed within our reach many "complete camp kits," in which most requisites are neatly stowed away, and the special features of which are lightness and convenience. Warren's cooking pots have stood the test of time and are considered unrivalled for convenience, portability, cleanliness and economy of fuel. But the general introduction of aluminium has revolutionised our cooking pots, and it is now possible to carry in less space four times the number of kitchen utensils and table requisites without increasing the weight by an ounce. For example, let us take six aluminium Bombay shaped (straight pattern) deckchies, the largest 14 inches in diameter. Putting aside the largest and its cover, we "nest" the five others. Into the smaller

we pack our pepper and salt castors, butterpot, teaspoons, cups and saucers, and placing the lids on the deckchies after the manner of the Chinese puzzle boxes, we strap up the outer deckchie. Now we pack into the large deckchie a fry-pan with a hinged or removeable handle, inside this our plates, then the teapot, tumblers, milk jug, sugar basin, small pie dish, egg cups, knives, forks and spoons, all of aluminium and, topping up with the gridiron, we put on the cover and strap up as before. In this small space we have packed away every kitchen and table requisite, and the whole weighs but a few pounds, the articles are extremely durable and uncommonly cheap. I have omitted the kettle with its awkward handle, spout, and lid. It is quite unnecessary; for water, for tea and all other purposes can be boiled quite as well in a deckchie. For want of a better, an ordinary kerosine tin will, with the aid of a pair of shears, make a first-rate camp oven. A tiffin basket is absolutely necessary.

Crockery and Cutlery.—The usual plates, dishes, cups, mugs, knives, forks, spoons, etc., the two latter of aluminium. The tumblers should be of the same ware and arranged to “nest” into each other: in fact all the “crockery” may be of aluminium with advantage, and in this metal one can now get almost every article of tableware.

Kitchen, etc.—A good meat chopper, a large and strong knife, a fork, two large aluminium spoons, a small pestle and mortar, a few enamelled or aluminium plates and bowls of assorted sizes are necessities, also a dozen dusters. A good

camp cook can manage with these, supplemented by the many clever makeshifts known to camp servants. Any other items are optional.

Water Vessels.—A few kerosine tins fitted with iron handles make excellent buckets and, when on the march, will hold a lot of small gear. The old-fashioned leather *chagul* or water-bottle is useful in camp, and especially when marching or shooting; but the Australian water-bag is lighter and keeps the water cooler. It is made of stout English or American canvas (No. 4 for choice), is closely stitched into a square bag, in the top of which the nozzle of a bottle is tightly sewn. Two canvas loops with a wooden cross-piece form the handle, and a good fitting cork for the nozzle completes the arrangement. Before using it should be soaked for a few hours.

The water-bottle for personal use should be felt-covered, and may be of vulcanite, aluminium, glass or enamelled ware. Vulcanite and glass are good, but liable to crack; aluminium is the lightest and strongest, but *don't* put cold tea into it (especially Russian tea with a dash of lime-juice), unless you want to drink ink. The tannin acting on the acid, in a few hours, converts this most excellent beverage into a filthy and unpotable compound. Enamelled bottles, until the enamel cracks and the iron is exposed (when tea turns to ink as in aluminium), are good, but they do not keep liquids cool; damping the felt of the bottles insures a cool drink: on the whole, for camp use I recommend a felt-covered glass bottle.

Thermos flasks.—Their name is legion and they range in price from a few annas to a handful of rupees. For carrying hot or iced drinks they are indispensable. The better qualities and larger sizes can be had in leather cases.

Filter.—At the time of writing there is no filter to equal the Berkfield camp filter, worked on a pneumatic pump principle and fitting into a small wooden case.

Tent pegs may be carried, though in the jungles they can generally be cut near at hand, but for places like Tibet, where wood is extremely scarce, it is as well to take light iron ones with an eye at the end *secured by a chain and padlock*.

Tools.—An adze will replace the tent peg mallet and be found a very useful instrument about camp, for it will drive in tent pegs, clear the ground, dig a trench, split firewood, cut timber in the rough, and perform various useful jobs. A luxury in the shape of a most ingenious and complete folding leather tool case is supplied by Messrs. Pigott Bros. & Co., Bishopsgate Street, London. It takes up but little room and contains every tool likely to be needed in camp, from a handy axe to a gimlet, and includes screws, nails and tacks. If this is not available, don't forget an adze, axe, hammer, large and small screw-drivers, small saw, a few assorted files, a shoemaker's haft containing needles, thread, awls and wax, pliers, bradawls, a leather punch, large scissors, small vice. A few screws, nails and tacks; and ice brads for boots. A "Bonser" pocket tool case is a good thing to have. A large waterproof sheet is always useful.

Stores.—Here again the personal equation must be taken into consideration, but I might suggest compressed vegetables, jam, cheese, oatmeal, Liebig or Bovril, army rations, Lazenby's soup squares, "Maggi," "Marmite" and Edwardes' soups, onions, potatoes, cooking stuff, biscuits, tea, coffee, cocoa, sugar, "Sparklets" macaroni, corn-flour, dried fruits, Borwick's baking powder, condensed milk, sauce and condiments, salt, butter, bacon, lard in tins, mustard oil in tins, rice, *dal*, curry powder; also such tinned provisions as individual tastes suggest. Candles, Sunlight soap for washing dusters, etc. For certain places nearly all these things must be carried, together with kerosine or some vegetable illuminant oil, or candles; for others, the list may be judiciously pruned as local supplies may justify. Liquor is a subject on which I will presume to offer no advice, merely contenting myself with a few hints. Brandy is a medical comfort, and a tot of some sort of spirit after the day's work is advisable. If a flask is carried, I recommend Britannia metal mounts: how acquisitive all natives are, to be sure! For servants, provisions must be carried, and these must be carefully arranged for in consultation with them, for much of the success of a shikar trip depends on keeping our *nawkers* comfortable and in good humour.

Medicines.—The tabloid and compressed drug system now so popular enables us to take into camp a complete medical equipment packed into a little case which need not exceed $5 \times 5 \times 2$ inches. There are soloids for preparing lotions and tabloids for internal medication, and Messrs. Burroughs, Wellcome and Co. turn out pocket

or saddle cases which contain assortments of drugs sufficient to cope with all emergencies. These are to be recommended ; but it will be necessary to supplement them with a few simple instruments and surgical appliances. Appended is a list of useful medicines which may be solely relied on, or from which a selection can be made to supplement the pocket case above referred to :—Cockle's Pills, Chlorodyne, Camphor Liniment, Vaseline, Eno's Fruit Salt, Holloway's Ointment, Perry Davis's Painkiller, Rose Water (for the eyes), Essence of Ginger, Kutnow's Powder, Castor Oil or Jalap (for servants). Homoea (for blisters and chafes), Powdered Boracic Acid, Eucalyptus Oil, Friar's Balsam, Carbolic Oil, Phenacetin, a Stick of Nitrate of Silver (for bites), Rigolett's Mustard Leaves (for plasters), Tincture of Opium (a drop or two in the eye affords instant relief from snow blindness), Lincel Liniment (for sprains, rheumatism, etc.), Little's Oriental Balm (for headaches, etc.), "Omum Kapoor" (for colic), "Jwara Hari" (for fever), Croton Oil (for sunstroke), Powell's Balsam of Aniseed (for coughs), Bunter's Nervine (for toothache). Quinine (in pills or powder) good brandy, a measure glass, scales and weights, antiseptic lint, bandages, carbolic wool, boracic gauze, sticking plaster, a thermometer, a pair of scissors, a lancet, a pair of tweezers, a caustic pencil and a packet of safety pins, needles and wire for stitching wounds, Higginson's syringe, Esmarch's elastic ring and twister, pair of forceps, hypodermic syringe and latest remedies for snake-bite.

Useful Articles.—Binoculars or telescope, a pocket compass, glare goggles, whistle, pocket shikar knife and hunting knife, notebook, diary, stationery, maps,

string, wire, a "housewife" containing needles, cotton, pins, etc., tin opener, corkscrew, burning glass, toilet-paper, twine, matches in bottle or airtight tins, Neat's foot oil for boots, "Orite," and Rangoon oil for guns, together with a good supply of jute waste or coir and gun rags, which will be found useful as packing for crockery and bottles, a spring weighing machine, and measuring tape. A camera is useful.

Coolies' Loads.—Twelve loads, about 50 lb. each, should be ample for a two months' camp in the Himalayas, including everything. All the loads should be *one man's load*, as things cannot be carried safely over bad ground when slung on poles between two or more men.

Camp Taxidermy.—For the rough work carried out in camp, few implements are required; a skinning knife, skin scraper, scissors, and a pair of forceps or pliers, a small saw and a hone are practically all that is needed. There are many good preservatives now sold in powder or liquid state and they may be safely used, though perhaps the old-fashioned lime, salt, alum and wood-ash methods will be found the most satisfactory, and with these all native skimmers are familiar. A *Kurpi*, such as all moochies use, is invaluable for scraping skins, and I may add a few butcher's knives for skinning.

GUNS, RIFLES AND AMMUNITION.

The best gun for all-round use is a 12 bore, weight with 30-inch barrels, $6\frac{3}{4}$ lb., 30-inch barrels are the best length for a 12 bore. The majority of guns are now made with the right barrel improved cylinder and the left half choke; a well bored gun should give the following percentage of pellets in a 30-inch circle for the four various borings of guns at the ranges indicated. For general use No. 4 and No. 6 are the best size shot to use; but for quail and snipe, one ounce of No. 8 is the best charge.

Patterns at all Ranges.

Range.				True cylinder.	Improved cylinder.	Half choke.	Full choke.
				Per cent.	Per cent.	Per cent.	Per cent.
30 yards	..	..	..	80	72	83	95
35 "	..	..	..	49	61	71	82

Patterns at all Ranges—*contd.*

Range.				True cylinder.	Improved cylinder.	Half choke.	Full choke.
				Per cent.	Per cent.	Per cent.	Per cent.
40 yards	..	..	..	40	50	60	70
45 "	..	..	..	33	42	50	60
50 "	..	..	..	26	33	40	48
55 "	..	..	..	21	27	32	39
60 "	..	..	..	17	22	26	32

The number of pellets represented by the percentage for any size or charge of shot is easily calculated by drawing the total number of pellets in the charge. Example. Charge $1\frac{1}{16}$ oz. No. 5, to find pattern at 50 yards for a half choke barrel. Total pellets 234, multiplied by 40 (from above table) and divided by 100. Answer 93·6, say 94.

A heavier 12 bore, about $7\frac{1}{4}$ lb. to $7\frac{1}{2}$ lb. in weight, with 32-inch barrels, taking $1\frac{1}{4}$ to $1\frac{1}{2}$ ounce of shot, choke bore, is useful for wild fowl shooting only, and recommended in preference to a larger bore for shore shooting. The range of accuracy of a smooth bore gun, firing ball, is about fifty yards. There are a few bullets now made which can be used in either cylinder or choke barrels. They are safer for use

in good quality guns than the old 13 gauge bullet and patch, as there is no danger of damaging the barrels: moreover, more accuracy and striking energy are secured. I would mention, in this connection, Manton's Patent "Contractile," Lyon & Lyon's "Lethal" and Rodda's "Rotax," all of which have given very excellent results. Sportsmen requiring a weapon with a longer range have the choice of rifled ball guns such as the "Paradox" and "Explora." They are, however, heavier than ordinary shot guns.

A 16 bore gun with 30-inch barrels should weigh about $6\frac{1}{2}$ lb. and a 20 bore gun with 28-inch barrels should weigh about $5\frac{1}{2}$ lb.

RIFLES.

The modern High Velocity rifles are far preferable to the old Black Powder weapons which are now almost obsolete, and are more accurate, have a much lower trajectory, and, bore for bore, have nearly twice the power.

Cartridges are available, however, loaded with Low Pressure Cordite suitable for use in Black Powder rifles which give a far greater striking energy than the old Black Powder Cartridge and are much in demand.

For Himalayan shooting, one cannot beat the .350 Rigby magnum single barrel magazine rifle, weighing about 9 lb. or double $10\frac{1}{2}$ lb. with 26-inch barrels. There

is also the '375 and the super '30 Holland magnum, powerful weapons with flat trajectory. In addition there are several types of Mauser and Mannlicher rifles.

For all-round shooting a '400 bore rifle is second to none, but there are other bores to choose from, for example '465 and '476.

The '470 D. B. high velocity rifles (12 lb.) seem to be powerful enough for anything, although some sportsmen favour heavier bores such as '500, '577 and even '600 cordite.

For soft-skinned game, the '350, '375, '400 and '404 bore rifles should be used with bullets having half an inch of soft lead exposed above the nickel to insure expansion. A double rifle is at all times preferable to a single, *if of best quality and made by one of the leading gunmakers*. The eye catches the two sights in line quicker between the barrels of a double than along the narrow incline of a single.

Small bores such as '240, '256 and '22 high power are not recommended, owing to the uncertain effects produced on game. It is true that much game is killed by these weapons, but they often fail, and from the small hole made by the bullet, animals are frequently lost owing to there being little or no blood trail. The '350 and the '375 are the smallest bores recommended.

Hammerless weapons of course are more expensive: weapons of best finish are far preferable to cheap weapons. By finish I do not mean engraving, though a best weapon is usually neatly engraved; but *finish* consists in the accurate fitting

and smooth working of all the parts, nice balance, best locks and handsome stock of well seasoned wood.

Standard Ballistics of the better known High Velocity Rifle Cartridges.

Bore.						Muzzle Velocity.	Muzzle Energy.
						Ft. per sec.	Ft. lb.
.256	Mannlicher	..	..	..	..	2,395	2,035
.275	Mauser ..	..	..	..	..	2,300	2,030
.280	Ross ..	..	..	..	..	2,850	2,885
.318	Rimless	..	..	..	..	2,400	3,194
.333	Jeffery	..	..	..	..	2,400	3,194
.350	Rigby ..	..	..	..	..	2,150	3,178
.400	} W. R.	..	..	..	..	1,900	2,515
.360							
.375	Mannlicher	..	..	..	..	2,200	2,905
.400	Jeffery	..	..	..	..	2,125	4,006
.404	Mauser	..	..	..	..	2,125	4,006
.405	Winchester	..	..	..	..	2,200	3,220
.465	Holland	..	..	..	..	2,125	4,807

**Standard Ballistics of the better known High Velocity Rifle Cartridges—
contd.**

	Bore.		Muzzle Velocity.	Muzzle Energy.
		Ft. per sec.		Ft. lb.
.470 Nitro	2,125	5,007
.475 Ditto	2,175	5,037
.475 Ditto	2,100	5,086
.500 Ditto	2,150	5,814
.577 Ditto	2,050	6,994
.600 Ditto	1,950	7,590
.240 Holland	2,950	1,940
.375 Ditto	2,700	4,375
.350 No. 2 Rigby	2,550	3,265
.350 Magnum	2,600	3,400
.30 Super	2,800	3,150
.425 W. B.	2,350	5,022
.270 Winchester	3,160	2,880
.22 Savage	3,000	1,906
.25 Ditto	3,000	1,739

Downhill shots.—Shooting downhill is the hardest shooting of all, and allowance has to be made in sighting. Thus an animal 200 yards off vertically and only 100 yards horizontally, the 100 yards sight taken very fine, should suffice. Practice is required, and a long target placed “down the khud” will tell an inexperienced shooter a lot.

Sights for rifles.—A wide and shallow notch in the backsight is perhaps the best for all-round shooting for those who object to Lyman sights. The foresight should be of ivory, platinum or gold, bead pattern, and not too fine. The American “Caterpillar” foresights are the best I know; they are strongly made and tipped with ivory or platinum.

It is important that the backsight on a rifle should be the right focus and not too close to the eye. From 22 to 24½ inches from the heel of stock in a single, or 6 to 8½ inches from the breech in a double, according to the age and eyesight of the shooter. Focus is as important in rifle shooting as it is in looking through a telescope.

New rifles should be tested carefully at a target before using on game, and a few shots tried at near objects, at a bull, the size of a rupee, at from ten to twenty yards. A sportsman has frequently to take shots at dangerous game at close quarters; fine shooting is required and he should know exactly where to aim and how fine a sight to take.

Judging distances.—Young sportsmen usually overestimate the distance, and a miss is the result. Practice alone will teach.

A useful battery.—A 12 bore gun and a '400 rifle form a useful battery for all-round shooting. But for bison, buffalo and rhino, a larger bore weapon should also be taken. The gun or rifle that is the sportsman's constant companion, is usually the most effective, and the man with many weapons is often not so successful as the man with the "all-round" rifle. Great care should be taken in cleaning all weapons, and cordite rifles especially require extra care. A nitro-cleaning compound, such as the B. S. A. "Safetipaste," vaseline and Rangoon oil are necessary to keep nitro-weapons in good order.

Messrs. Westley Richards & Co.'s rifles are famous throughout the world, and their high velocity nitro-express rifles are thoroughly reliable weapons of the highest class. Here mention may be made of their highly useful "Explora." The grounds upon which it claims special reference are based on the fact that it effected the following improvements:—1. Increased the range of the ball and shot gun from one hundred to three hundred yards: that is a matter of history. 2. It increased the velocity and flattened the trajectory. 3. It introduced two new bullets, the brass capped for the purpose of penetration, and the all-lead bullet for complete and instant expansion. The fact that it increased the ranging power of the bullet to three hundred yards is a proof that the "Explora" raised the standard of

accuracy of the ball and shot gun at all ranges, and this fact has been testified to on many sides. The R. 28 bore "Fauneta" was another variation of their system. It was asserted that the R. 28 bore was too small as regards shot for Indian sport. I am not sure that this is the case, but to meet the objection Messrs. Westley Richards & Co. have now arranged a R. 20 bore "Fauneta" ball and shot gun, which is a great advance and provides a very useful weapon for the Indian sportsman. This R. 20 bore shoots a bullet of 425 gr. with a very favourable velocity of 1,500 feet per second with an energy of 2,121 feet lb., and shoots shot patterns of a very high standard and even distribution. The bullets are the brass-capped and a nickel base lead bullet on a similar principle to the capped. The weight of this gun for India is between $6\frac{1}{2}$ and 7 lb.

The '318 bore Accelerated Express, because it is a small bore, probably stands at the head of the small bore rifles, possessing as it does the exceptional velocity of 2,500 F. S. combined with a good bullet weight, viz., 250 grains, by which a muzzle energy of 3,466 feet lb. is obtained, and this energy is not wasted as it is in most high velocity rifles shooting a light bullet, because the capped-pointed bullet employs this energy in shock, damaging and destructive qualities as opposed to the penetrative qualities, and, consequently, waste of energy distinctive of the other small more high velocity rifles. Then there is the '476 Magnum, which shoots the heaviest charge of any rifle between the '450 bore and the '500 bore, viz., '476 bore, 520 gr. bullet, 75 grains of powder, and in conjunction with this the pointed-capped

bullet known as the L. T. nickel bullet mark I, that is for the combined purposes of high penetration and expansion, and also a bullet having a nickel base and a lead front, hollow within, on the principle inaugurated by the capped bullet by which complete and instant expansion is set up for use on soft-skinned animals. Other English makers whose names are familiar to all who handle rifles are Messrs. Purdey & Co.; Holland & Holland; Messrs. John Rigby & Co., Lancaster, and in India Messrs. Manton & Co.; Rodda & Co. and Lyon & Lyon. All these firms have specialities in double and single barrelled and express rifles from '240 to '600.

Recommended "Standard Loads."

Gauge.	Length of Case.	"Smokeless Dia- mond," "E. C." or "Empire" 33-gr. Powder.		"Schultze" or "Amberite" 42-gr. Powder.		Black Powder.	
		Pdr.	Shot.	Pdr.	Shot.	Pdr.	Shot.
	Inches.	Grs.	Ozs.	Grs.	Ozs.	Drs.	Ozs.
4	4	90	3	112	3 $\frac{1}{4}$	9	3 $\frac{1}{4}$
8	4 $\frac{1}{4}$	77	2 $\frac{1}{2}$	88	2 $\frac{3}{4}$	8	2 $\frac{3}{4}$

Recommended "Standard Loads"—*contd.*

Range.	Length of Case.	"Smokeless Dia- mond," "E. C." or "Empire," 33-gr. Powder.		"Schnitzke" or "Ankerite," 42-gr. Powder.		Black Powder.	
		Pdr.	Shot.	Pdr.	Shot.	Pdr.	Shot.
8 ..	1	Grs. 73	Ozs. 28	Grs. 85	Ozs. 21	Grs. 75	Ozs. 21
8 ..	3 $\frac{3}{4}$	70	24	83	21	75	22
8 ..	3 $\frac{1}{2}$	65	21	80	21	7	22
8 ..	3 $\frac{1}{4}$	60	2	77	21	62	21
10 ..	3 $\frac{1}{4}$	48	1 $\frac{5}{8}$	60	1 $\frac{5}{8}$	45	22
10 ..	3	46	1 $\frac{1}{2}$	56	1 $\frac{5}{8}$	4	14
10 ..	2 $\frac{3}{4}$	44	1 $\frac{1}{16}$	56	1 $\frac{1}{16}$	4	14
10 ..	2 $\frac{1}{2}$	38	1 $\frac{1}{16}$	49	1 $\frac{1}{16}$	3 $\frac{1}{2}$	13
12 ..	3	40	1 $\frac{1}{8}$	50	1 $\frac{1}{8}$	3 $\frac{1}{2}$	13
12 ..	2 $\frac{3}{4}$	36	1 $\frac{1}{4}$	46	1 $\frac{1}{4}$	34	13
12 ..	2 $\frac{1}{2}$	33	1 $\frac{1}{16}$	42	1 $\frac{1}{16}$	3	13
14 ..	2 $\frac{1}{2}$	31	1	38	1	29	14
16 ..	3	23	1 $\frac{1}{16}$	42	1 $\frac{1}{16}$	3	16

Recommended "Standard Loads"—*concl'd.*

Gauge.	Length of Case.	"Smokless Diamond," "E. C." or "Empire" 33-gr. Powder.		"Schultze" or "Amberite" 42-gr. Powder.		Black Powder.	
		Pdr.	Shot.	Pdr.	Shot.	Pdr.	Shot.
		Grs.	Ozs.	Grs.	Ozs.	Drs.	Ozs.
16 ..	2 $\frac{3}{4}$	31	1	40	1 $\frac{1}{8}$	3	1 $\frac{1}{8}$
16 ..	2 $\frac{1}{2}$	28	$\frac{7}{8}$	36	$\frac{7}{8}$	2 $\frac{3}{4}$	$\frac{7}{8}$
20 ..	3	30	1	35	1	3	1
20 ..	2 $\frac{3}{4}$	26	$\frac{7}{8}$	33	$\frac{1}{8}$	2 $\frac{7}{8}$	$\frac{1}{8}$
20 ..	2 $\frac{1}{4}$	24	$\frac{3}{4}$	31	$\frac{3}{8}$	2 $\frac{1}{2}$	$\frac{3}{8}$
24 ..	2 $\frac{1}{4}$	22	$\frac{3}{4}$	27	$\frac{3}{8}$	2	$\frac{3}{8}$
28 ..	2 $\frac{1}{8}$	20	$\frac{3}{4}$	25	$\frac{3}{8}$	1 $\frac{3}{4}$	$\frac{3}{8}$
32 ..	2 $\frac{1}{8}$	16	$\frac{3}{4}$	21	$\frac{3}{8}$	1 $\frac{1}{8}$	$\frac{3}{8}$
410 ..	2 $\frac{1}{8}$	12 $\frac{1}{2}$	$\frac{3}{4}$	16	$\frac{3}{8}$	1	$\frac{3}{8}$
410 ..	2	9	$\frac{3}{4}$	11	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{8}$
360 ..	1 $\frac{3}{4}$	6	$\frac{3}{4}$	7	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{8}$

"Standard Loads" for "Sporting Ballistite" Condensed Powder.

Gauge.					Length of Case.	Powder.	Shot.
						Grs.	Ozs.
12	..	..	..	..	3	20	$1\frac{5}{16}$
12	..	..	..	..	$2\frac{3}{4}$	28	$1\frac{1}{4}$
12	..	..	..	..	$2\frac{1}{2}$	25	$1\frac{1}{16}$
16	..	..	..	.	$2\frac{3}{4}$	23	1
16	..	..	..	..	$2\frac{1}{2}$	21	$\frac{7}{8}$
20	..	..	..	.	$2\frac{1}{2}$	18	$\frac{3}{4}$

Other Popular Loads.

Gauge.				Length of Case.	"Smokeless Dia- mond," "E. C." or "Empire" 33-gr. Powder.		"Schultze" or "Amberite" 42-gr. Powder.		"Sporting Ballis- tite" condensed Powder.	
					Pdr.	Shot.	Pdr.	Shot.	Pdr.	Shot.
				Inches.	Grs.	Ozs.	Grs.	Ozs.	Grs.	Ozs.
12	..	..	..	$2\frac{3}{4}$	38	$1\frac{1}{4}$	47	$1\frac{1}{4}$	29	$1\frac{1}{2}$
12	..	..	..	$2\frac{1}{2}$	33	$1\frac{1}{2}$	42	$1\frac{1}{8}$	26	$1\frac{1}{8}$
12	..	..	..	$2\frac{1}{2}$	36	1	46	1	—	—
12	..	..	..	$2\frac{1}{2}$	35	1	45	1	—	—
12	..	..	..	$2\frac{1}{2}$	31	1	44	1	—	—
12	..	..	..	$2\frac{1}{2}$	33	1	43	1	—	—
12	..	..	..	$2\frac{1}{2}$	34	$1\frac{1}{16}$	42	1	—	—

Where 1-oz. shot charges are required for 12 gauge cartridges, the use of 33-grain powders is recommended in preference to 42-grain powders.

ADDENDUM.

MESSRS. GREENER'S GUNS AND RIFLES.

As this edition of the *Shikar Book* is going to press, I find, to my discomfiture, that I have omitted reference to the specialities of my old friends Messrs. W. W. Greener, Ltd. I make my *amende* in this addendum slip. A "Greener" is, of course, as well-known and cherished by sportsmen in India as in other parts of the world, whether it be a smooth bore of the highest grade or a big game rifle of proved merit.

During the last half century, many improvements have been introduced by British makers; Greeners pin their faith in special attention to barrels. They adhere to their well-known method of boring—a synonym for "accuracy"—and their successes in many Championship shoots prove the soundness of this policy.

The "Empire" gun, primarily designed for shooting such as India affords, epitomises all the qualities which sportsmen look for in their weapons. The "New Model Ejector" called the "Unique," with the ejecting locks in the fore-end, has been produced to meet the requirements of those who prefer the fore-end ejector, and from its comparative simplicity it takes high rank among its class.

The "Facile Princeps" lock mechanism is claimed to be quicker in action than any other system. It is applied to their choke-bore rifles, made in 12-bore weight, $7\frac{1}{2}$ to $8\frac{1}{2}$ lbs. and bored on a different principle to any other of these double purpose weapons.

A new model, and moderately priced, rifle has been introduced with Mauser magazine action, 26 in. round barrel, weight $7\frac{1}{2}$ lbs., and sighted up to 500 yards: the magazine holds either three or four cartridges. It should be popular for Himalayan big-game shooting.

USEFUL VALUES.

437.5 grains = 1 oz. Avoirdupois : 7,000 grains = 1 lb. Avoirdupois.

The Apothecary and Troy ounce both contain 480 grains.

The 16th part of 1 oz. A, = 1 dram = 27.3 grains. Three drams of Black Powder thus practically equal 82 grains, but 3 drams of Smokeless Powder is the amount which will fill a three-dram measure set for 82 grains of Black Powder, 42 grains of Schultze and 33 grains of Smokeless Diamond thus represent 3 drams by measure but not by weight. They are the energy in a cartridge equivalent to three drams of Black Powder.

CHOOSING A SHOT SIZE.

One man whispers in your ear, "Do you know the right size of shot to use? No. 7, it is the longest killer of the lot." Another says, "I always use 'fours' and have proved by experience that there is none so good."

The long and the short of it appears to be that a gun is outranged when the pattern gets too thin to put its quota of pellets into the quarry. But—and it is a big but—good shooting is necessary to centre the charge, to choose the most

favourable bird to aim at, to utilise the most favourable moment in its passage, and when birds are out of range, etc., etc.

Granting these attributes of good sportsmanship, and knowing the range at which birds are commonly available, there is a very fine point of difference between, say, 200 large pellets in the cartridge and 300 small. It is a difference easily lost amidst other chances and happenings. What is certain is that the size a man favours is the one with which he shoots best.

For those in doubt there is No. 6 at 270 per oz. It is a carefully made size and a blending of extreme views.

STANDARDISING A POWDER.

A powder must possess a number of vital qualities. Some of these are natural to its fundamental formula, others depend on close watching as the batches go through their allotted processes, but the fine adjustment is imparted by the process known as standardisation.

Every expert concerned with the turning out of a powder is inspired by certain ideals. Routine tests of pressure, velocity, time of ignition, recoil and pattern are not sufficient in themselves, no matter how rigid may be the limits which are

imposed. What counts in the long run is the quality of judgment exercised in interpreting the results.

The standard 33-grain charge can be made to produce almost any result whatsoever. Nobel's selected ideal for each powder is reflected in the reputation it has gained for the possession of certain qualities. The sportsman's business is to find out which powder best responds to his own range of faculties, also the combination of powder and shot which most sympathetically reacts to the same indefinable personal factor.

The best jumping off point for these individual enquiries is the standard charge. Be impartial and just in your observations, conservative in making changes. Above all, when once you are about right stay there and build up your skill in the certainty that standardisation ensures a like result day by day and week by week throughout the season.

HINTS ON SHOT-GUN AND RIFLE CARTRIDGES.

Without entering into the particulars of the variation of range and power of different sizes of shot, it may be useful to bear in mind—weights of powder, lead, and other conditions remaining the same—that with each increase in the size of the

shot, there is an increase in the force per pellet, there is of a necessity a diminution of the number of pellets on the object aimed at, but unfortunately also the pellets are correspondingly scattered and the pattern wide, irregular, and deteriorated.

The remaining force of No. 4 shot at 60 and 80 yards is about equal to No. 6 at 40 and 60, respectively, but, as the pattern of the larger shot is deteriorated, $2\frac{3}{4}$ drams instead of 3 drams may be used advantageously with No. 4 and larger shot. The pattern would be better and the remaining force in the larger shot would have sufficient killing power at 60 yards.

When loading with a very large shot, fill up the interstices with wax.

Balling and clustering of the shot arises from many causes. From the hot powder gases getting past the wads fusing several pellets together, from a too quickly igniting powder, from the coning of the barrels being too sharp, from the size of the shot and quantity, from the turnover of the cartridge, from the impact of the shot against hard wads, etc., all of which require a special cure.

Leading chiefly occurs towards the breech end of the barrel, where it is often undetected. It is prevalent in choke bores. If the deposit is not very great, tow or cotton wound into a knob, round the jag of the cleaning rod, and saturated with spirits of turpentine, will remove it; but if it is leaded considerably, do not

use the steel wire brush, but a brass one such as recommended by Sir R. Payne Gallwey.

In case of miss fires, the fault is almost certain to lie in the gun, one of the many causes arises from the faulty shape of the striker. The length of the part projecting from the gun should be one-tenth of an inch, and the end blunt. If the end be too pointed, miss or hang fires will frequently occur; but the fault is not always with the gun; I have known two miss fires occur in rifles—One in a .400—360 double hammer cordite rifle. The fault was in the cartridge, as the cap was not only fully dented, but driven well into the case.

Another occurred with a .450 Black Powder rifle, and the cap was dented and driven in similar to the .360. Both above happened in best quality rifles by two of the very best makers. The rifles were not to blame. For shooting in the Himalayas, either in hot valleys at from 4,000 to 6,000 feet in September, or on the upper ranges from 10,000 to 14,000 feet in November and December, I have found no powder to equal Smokeless Diamond or Schultze for regularity and killing power. I have also tried them under a blazing sun in the plains, and found them just as satisfactory. This also applies to cordite cartridges in rifles, but for safety no nitro powder cartridges should be allowed to remain long in heated barrels. When having lunch or resting during the day, one's cartridge bag should always be put in a shady place, and gun or rifle as well.

DIAMETER OF SPREAD OF SHOT CARTRIDGES.

Being the diameter in inches covered by the whole range of a gun at various ranges for all calibres.

Range in yards.	BORING OF GUN.			
	True cylinder.	Improved cylinder.	Half choke.	Full choke.
10	..	..	..	..
15	..	..	..	..
20	..	..	..	..
25	..	..	..	..
30	..	..	..	..
35	..	..	..	..
40	..	..	..	..
	Inches.	Inches.	Inches.	Inches.
	19	15	12	9
	26	20	16	12
	32	26	20	16
	38	32	26	21
	44	38	32	26
	51	44	38	32
	57	51	46	40

SHOOTING SCHOOL PRACTICE.

The equipment, methods and advantages of clay target practice on the shooting school system are too well known to need any emphasis here. Every gunmaker

of note either maintains his own shooting school or patronises a particular establishment which caters for all comers.

By means of clay targets thrown from suitably located traps every classifiable character of bird flight is mechanically reproduced and the opportunity afforded for gaining proficiency. There is no exaggeration in saying that the foundations of skill with the gun are better laid by 1,000 cartridges expended at a shooting school than ten times that number at game.

For those who have already gained a satisfactory measure of skill a series of preliminary practices before the shooting season opens is of untold value. It hardens the shooting and recoil-absorbing muscles, it reveals changes in constitution which need correction in the fit of the gun, it re-establishes sympathy between hand and eye, it recalls latent knowledge of how particular shots should be taken, and, above all, it ensures a satisfactory feeling of confidence on the opening day, always, for the individual, the most important day of the season.

CLAY TARGET SHOOTING.

There is a considerable demand for shot-gun shooting over and above that available in pursuit of game. The motive may be sheer love of the gun or a need

for more practice than limited opportunity for sport may provide. A clay target shooting club supplies the opportunity for those residing within a convenient radius.

Its equipment is simple and inexpensive. A suitable site having been found, all that is needed is one of the modern automatic angle traps, a pavilion and such other amenities as the situation may demand. Once the proposal gains publicity a substantial nucleus of members is virtually assured, and all else falls naturally into place. What a pity the old and popular Calcutta Clay Pigeon Club, which held its meetings, at Lyon & Lyon's range, died out!

SMOKELESS POWDERS.

The following observations from *The Shooter's Year Book* will be useful to all.

The standard charge of Black Powder for a 2½-inch 12-gauge cartridge is 3 drams, which equals 82 grains. Before the introduction of Smokeless Powders, when Black Powders held the field, it was the universal custom to load this 3-dram charge by measure, or "bulk," from a cup of such a size as to hold exactly 82 grains weight: loading was clearly a more quick and easy procedure under this system than it would have been had each charge been weighed out separately. These cups were known as 3-dram measures.

In order to avoid confusion and possible danger when Smokeless Powders were introduced, such powders were made of a bulk that would enable the same 3-dram measure to be used to measure out the proper charge. With some powders (such as "Schultze") the volume that can be contained in the measure weighs 42 grains, whereas with others (such as "Smokeless Diamond" or "E.C.") it weighs only 33, these two weights being the correct charges respectively for a 12-bore $2\frac{1}{2}$ -inch case. Powders which can be loaded by utilising a 3-dram measure in this way are known as "bulk" powders, the bulk of the correct charge being the same as the bulk of the correct Black Powder charge, but the weight being different.

Certain powders, such as "Sporting Ballistite," are altogether different. The standard charge of "Sporting Ballistite" for a 12-gauge $2\frac{1}{2}$ -inch cartridge is only 25 grains, which charge would not fill a 3-dram measure; were a 3-dram measure to be completely filled with "Sporting Ballistite," the resulting charge would be a grossly excessive one. Such powders, known as "dense" or "condensed" powders, cannot be loaded from the 3-dram measure.

The treatment of powders in manufacture to ensure that they shall bulk correctly is an intricate and expensive one which is apt to be curtailed with inferior and cheap powders; with such powders the volume resulting from the filling of a 3-dram measure may give by weight either too great or too small a charge.

Nobel Industries Limited produce various Smokeless Powders, some of the 33-grain bulk type, some of the 42-grain bulk type, and one a condensed powder. Each powder is so manufactured and tested as to ensure its possessing certain qualities that to-day are considered essential in a high-class powder—resistance to moisture, clean and regular burning, correct bulking, easy recoil, regular ballistics, and, in general, stability under varying climatic conditions.

A point worth noting is that all the Nobel powders have the merit of leaving an alkaline—i.e., a protective—deposit in the bore of the gun. This does not mean that their powders are “dirty”; it means that a residual deposit must necessarily be left by the combustion of any powder, and that this deposit, with Nobel powders, though almost inappreciable, is, so far as it exists, actually anti-corrosive in its action.

It is common knowledge that individual sportsmen have each their particular fancy in sporting powders. One, for instance, may be in the habit of using a light gun and will accordingly want a powder giving the least possible recoil, whereas another may not mind—he may, indeed, like—“noticing” his gun when he fires; while a third may insist upon moisture-resistance before everything in his powder.

These varying and sometimes conflicting needs have been borne in mind by the Company. For the first man there are the 33-grain bulk powders, such as “E.C.,” “Smokeless Diamond,” or “Empire”—quick, but easy-shooting; for the second

there are the 42-grain bulk powders—"Schultze," or "Amberite"—with 9 grains more weight, which will affect recoil, certainly, but with a hint of power about them: the third will undoubtedly choose "Sporting Ballistite," because here he has a powder that is really waterproof.

The distinguishing qualities of the powders mentioned are indicated below, so that shooting men may be enabled to choose for themselves according to their fancies.

"Smokeless Diamond."

This is a 33-grain bulk powder in the form of hard, black, circular flakes. A most comfortable powder to shoot, it has a great and justified reputation for quickness on the bird ("marvellously quick"), and, moreover, is capable of resisting climatic and loading variations to a high degree. It is loaded into "Pegamoid," "Zenith," "Primax," and "Grand Prix" cartridges. It may be mentioned that "Smokeless Diamond" differs from other bulk powders in that it is gelatinised so that flakes can be sliced one by one from rods as they are squirted through apertures on a press, each flake being thus formed absolutely consistently by mechanical means.

"Sporting Ballistite."

A condensed (25-grain) powder, in the form of square graphited flakes, "Sporting Ballistite" occupies considerably less volume in a cartridge case than do 33-grain

or 42-grain bulk powders, and is, therefore, usually loaded into a special case which has a cone at the base, an unduly long column of wadding being thus avoided. This powder is absolutely waterproof—moisture has no effect upon it whatsoever; nor, incidentally, is it affected by long storage under varying conditions of heat and cold. As evidence of this statement it may be mentioned that a sample tested sixteen years after manufacture was found to yield ballistic results identical with those given when it was first issued. It is no doubt for these reasons that “Sporting Ballistite” has always been so greatly favoured by wild-fowlers. Like “Smokeless Diamond,” it is known for its quick shooting, which has gained it a high reputation with pigeon-shots, likely to be equalled by its growing popularity, in “Sporting Ballistite” (cone-based) cartridges, for use against driven game.

“E.C.”

“E.C.” Powder, now produced in the form of small orange-red grains, is the original 33-grain bulk smokeless powder; it was developed from the 42-grain type of “E.C.” Powder first introduced in 1882, thus having behind it the experience of over forty years. The cause of its popularity is well summed up in the expression, “efficiency, with comfort,” it being a powder specially favoured by shooters who seek as low a recoil as possible or who are subject to gun-headache. A similar test to that mentioned under “Sporting Ballistite” was recently made upon a sample of

"E.C." Powder that had been manufactured actually twenty-six years previously: accurate ballistic results were none the less obtained, showing that the powder had in no way deteriorated. "E.C." is loaded into "Pegamoid," "Zenith," Bonax," and "Acme" cartridges.

"Schultze."

This was the first Smokeless Powder ever manufactured in England. It is of the 42-grain bulk type, in small white granule form, and is highly popular with that large school of sportsmen who like to feel that their powder has an ample margin of power. Its combustion properties permit the attainment of proper velocity and penetration with high loads without an increase in chamber pressure. "Pegamoid," "Westminster," "Eley Smokeless" and "Yeoman" cartridges are loaded with "Schultze" powder.

"Amberite."

This powder is very similar to "Schultze," being a 42-grain powder of a light brown colour. Its properties much resemble those inherent in "Schultze," but its ballistics are regulated at a slightly different level that finds favour with many sportsmen.

"Empire."

A 33-grain granular powder of a purple-grey colour, "Empire" is known as the sweetest-shooting of all sporting powders. It is a special favourite with those who fire a large number of cartridges in the course of a day's shooting, and is in great demand among clay bird shooters—not only because of its noticeably easy behaviour, but because it has in addition the knack of throwing exceptionally fine patterns. This is undoubtedly the powder for the game or clay bird shot who likes the activity of the 33-grain group of powders but has a heavy day's firing before him.

SOMETHING ABOUT SHOT-GUN CARTRIDGE CASES.

The cartridge case is not only a packet for containing the load, but is a plastic body which seals or "obturate" the inevitable separation between barrel and breech, making it gastight under a pressure which normally attains nearly three tons on the square inch. Yet after the pressure has subsided it must shrink to the easy fit that permits ejection.

Ultimately, the strength depends on the gun, but the cartridge case must possess a flexible sort of strength of its own. Its component materials—brass, iron and paper—are combined in various designs.

The best has a deep brass head, a tube with exceptional wet-resisting qualities, a metal lining (additional to the iron disc which reinforces the base) and the usual compressed paper lump which holds all in combination. This, the "Gastight," construction is world standard.

The next group of cases dispenses with the metal lining, but comes very near to equalling the former's solidarity by unstinted depth of brass head, coupled with special treatment of the solid paper caulk or base-wad.

Finally, there are similarly constructed cases, either lined or unlined, with the brass head reduced to minimum size.

METALLIC AMMUNITION.

This is the name applied to cartridges having no paper in their composition, in a word rifle cartridges of the familiar type.

Referring particularly to big game shooting kinds, the modern forms are closely related to or, more properly speaking, descended from, the military design which came into being with the introduction of smokeless military rifle powders in the early nineties, the military cartridge pure and simple having proved a wonderful hitter but a bad killer. It was in the British Empire, which comprises the finest hunting territories in the world, that the specialised high-power big game cartridge

was evolved. From the sportsman travelling *de luxe* to the latest arrived subaltern, the British legion of big game hunters formed a wonderful band of experimentalists. Backed by the élite of the gun-making profession, supported and led from the background by our ammunition and powder makers, big game shooting gradually became more certain in its methods, safer and above all more humane.

To-day—as always—the best rifles firing the best ammunition (which is synonymous with saying Nobel's) are British.

WEIGHTS AND MEASURES.

Avoirdupois Weight.—16 drachms make 1 oz. ; 16 oz. make 1 lb.

Troy Weight.—24 grains make 1 dwt. ; 20 dwt. make 1 oz. ; 12 oz. make 1 lb.

Apothecaries' Weight.—20 grains make 1 scruple ; 3 scruples make 1 drachm ; 8 drachms make 1 oz. ; 12 oz. make 1 lb.

The Grain Weight is the same in all tables. Powder is bought by Avoirdupois weight, but in weighing it for rifles, the Apothecaries' scale weight is used. Though only in respect of *grains*, not in drachms, as an Apothecary drachm is 60 grains ! but the correct drachm weight for weighing powder charges is $27\frac{1}{2}$ grains.

There are 7,000 grains in 1 lb. Avoirdupois.

Details of Shot Sizes.

Designation.					Pellets per oz.	Diameter inch.
LG	..	..	..	..	6	.360
MG	..	..	..	..	7	.347
SG	..	..	..	..	8	.332
<i>Special</i> SG	..	..	..	..	11	.298
SSG	..	..	..	..	15	.269
SSSG	..	..	..	..	20	.245
SSSSG	..	..	..	..	25	.227
SSSSSG	..	..	..	..	30	.214
AAA	..	..	..	..	35	.203
AA	..	..	..	..	40	.194
A	..	..	..	..	50	.180
BBB	..	..	..	..	60	.170
BB	..	..	..	..	70	.161
B	..	..	..	..	80	.154
1	..	..	..	..	100	.143
2	..	..	..	..	120	.135
3	..	..	..	..	140	.128
4	..	..	..	..	170	.120
4½	..	..	..	..	200	.113
5	..	..	..	..	220	.110
5½	..	..	..	..	240	.107

Details of Shot Sizes—contd.

Designation.					Pellets per oz.	Diameter inch.
6	..	..	..	..	270	.102
6½	..	..	..	..	300	.099
7	..	..	..	..	340	.095
8	..	..	..	..	450	.087
9	..	..	..	..	580	.080
10	..	..	..	..	850	.070
11	..	..	..	..	1,040	.066
12	..	..	..	..	1,250	.062

Pellets in Game Charges.

Oz. of Shot.				Size of Shot.						
				4	4½	5	5½	6	6½	7
1½	..	..	..	255	300	330	360	408	450	510
1⅞	..	..	..	244	288	316	345	391	431	489

Pellets in Game Charges—*contd.*

Oz. of Shot.	SIZE OF SHOT.						
	4	4½	5	5½	6	6½	7
1 3/4	234	275	303	330	374	413	408
1 7/8	223	263	280	315	357	394	446
1 1/2	213	250	275	300	340	375	425
1 1/4	202	238	261	285	323	376	404
1 1/8	191	225	248	270	306	338	383
1 1/16	181	213	234	255	280	319	361
ONE	170	200	220	240	270	300	340
1 1/16	159	188	206	225	255	281	319
1 1/8	149	175	193	210	238	263	298
1 1/4	138	163	179	195	221	244	276
1 1/2	128	150	165	180	204	225	255
1 3/4	117	138	151	165	187	206	234
1 7/8	106	125	138	150	170	187	212
1 1/2	96	113	124	135	153	169	191
1 1/4	85	100	110	120	136	150	170

**Velocity of Shot Cartridges at different ranges of Standard Velocity,
viz., 1,050 F. S.**

	RANGE IN YARDS.						
	10	20	30	35	40	50	60
Striking Velocity in feet seconds	1.026	845	716	662	615	534	466
Pellet energy in feet lb. ..	3.86	2.55	1.83	1.56	1.35	1.02	.77

MISCELLANEOUS INFORMATION.

Directions for self-measurement.—Take a piece of wood with a perfectly straight edge that is long enough to reach from the muzzle to the extremity of the butt, lay this straight edge along the upper rib of the gun. Then measure the distance between the heel of the butt and the bottom of the straight edge, and from the point of the comb also to the bottom of the straight edge. These measurements give the bend. For length the measurements will be from the centre of the right trigger to (1) the heel, (2) to the centre of the heel plate, (3) to the toe; and for depth from heel to toe. All measurements should be taken to the $\frac{1}{8}$ th of an inch.

To test the pull.—Tie a piece of string to each trigger, and, attaching them in turn to an accurate spring balance, place the gun trigger guard down on a table, and pull upwards and towards the body.

To test the balance.—Loop a piece of string round the fore-end about 3 inches in front of the breech, and hold the gun suspended. If the barrels are horizontal the balance is correct. A muzzle heavy gun should be condemned.

Selecting a gun.—In selecting a second-hand gun, it is not sufficient merely to look through the barrels, mount it to the shoulder, and aim at some imaginary object, open and close the breech with a snap, and read the maker's name. The proof mark should be examined, the breech and false breech looked at to see if there is plenty of metal between the extractor pin and the inside of the chamber, and the locks should be opened out and examined.

To clean guns.—Boiling water is excellent to clean weapons with. If the barrels are wet with rain, the heat caused by pouring boiling water through them quickly dries them. To clean a gun this way, pour boiling water slowly through from breech to muzzle, turning the barrels round as you do so. Then wipe out with flannel rags. To clean a rifle: first wipe out with a pull-through and "Orite," "Nitroclene," or other nitro-cleaning compound, then cork up the muzzle, pour boiling water till barrel is full, let water remain a few seconds, then remove the cork

(your bearer can do this!) and pour more water. Finally, wipe out well and finish with vaseline.

Before using, all vaseline should be thoroughly wiped from inside and the barrel should be absolutely dry. It is always worth while to pay personal attention to the cleaning of one's weapons, especially nitro rifles. To clean a weapon does not take more than ten minutes at the most. The outside of the barrels should be well cleaned and greased with vaseline. All dirt and particles of powder having been removed from the face, lever, hammers, etc., the metal parts of the stock should be treated with vaseline. The pin of the extractor, the firing pins, the spring in the fore-end need a drop or two of Rangoon oil applied with a small paint brush.

A brass-wire brush is better than one of steel, and the best is the Payne Gallwey brush already alluded to.

PHRASEOLOGY.

The following terms were in the past and are sometimes still used.

A *nye* of pheasants (a brood); a *badling* of ducks (a gathering); a *fall* of woodcock (a flock); a *skulk* of foxes (a troop); a *cete* of badgers (a company); a *sounder*

of swine (a herd); a *singular* of boars (a pack); a *pride* of lions (a group); a *sege* of herons (a flock); a *herd* of swans (a large number of swans feeding or travelling together); a *spring* of teal (a flock); a *covert* of coots (a flock); a *gaggle* of geese (a flock of wild geese); a *sord* or *sute* of mallard (a flock); a *bevy* of quails (a flock); a *covey* of partridges or grouse (a flock); a *pack* of grouse (a gathering of coveys); a *congregation* of plovers (a flock); a *walk* of snipe (a flock); a *wisp* of snipe (a flight); a *building* of rooks (a company or rookery); a *murmuration* of starlings (a flock).

^ DĀK BUNGALOWS.

ASSAM.

Names of Districts.

Names of Dāk Bungalows.

Cachar	.. Haflong, Hailakandy, Salchapra, Silchar.
Durrang	.. Tezpur.
Goalpara	.. Dhubri, Goalpara.
Kamrup	.. Gauhati.
Lakhimpur	.. Dibrugarh, Margherita, N. Lakhimpur, Tinsukia.
Nowgong	.. Barapujia, Dhurumtal, Kampur, Lunding, Nakhola, Nowgong, Roha, Silghat, and twelve staging bungalows.
Sibsagar	.. Golaghat, Zorhat, Sibsagar.
Shillong	.. Cherrapunji, Dumpur, Mauphlong, Nongpo, Shillong.
Sylhet	.. Badarpur, Chhattak, Fenchuganj, Habiganj, Kalaura, Karimganj, Maulvie Bazaar, Sylhet.

BENGAL, BEHAR AND ORISSA.

*Names of Districts.**Names of Dâk Bungalows.*

Balasore	..	Balasore, Barripur, Chundbally, Jellasore.
Bhagalpore	..	Bhagalpore.
Burdwan	..	Burdwan, Burrukur, Pundoah.
Champan	..	Matihari (Circuit House).
Chittagong	..	Chittagong.
Cuttack	..	Cuttack.
Dacca	..	Dacca, Narainganj.
Darjeeling	..	Choonbuly, Kurseong.
Diamond Harbour	..	Diamond Harbour.
Dinajpur	..	Dowlutpur.
Durbhunghah	..	Durbhunghah, Hajipur, Laheria Serai, Sonastipur.
Gaya	..	Baroon, Gaya, Jahanabad, Shergotty.
Hazaribagh	..	Bagodar, Dource, Giridih, Parishnath, Ramghur.
Hooghly and Howrah	..	Ulubaria.
Jalpaiguri	..	Jalpaiguri, Tilaya.
Jessore	..	Bongong, Jessore.
Manbhoom	..	Purulia, Topchanchely, Tulin.
Midnapore	..	Midnapore.
Monghyr	..	Monghyr.
Mozufferpore	..	Hajepur, Mozufferpore, Sitamarhi.
Murshidabad	..	Borhanpore.
Nuddea	..	Bagoola, Krishnagar.
Patna	..	Bankipore, Barrh, Baktiapore, Behar, Dinapore, Khagowl.
Plassey	..	Plassey.

BENGAL, BEHAR AND ORISSA—*contd.*

<i>Names of Districts.</i>	<i>Names of Dik Bungalows.</i>
Puri	.. No bungalow; there is the B. N. Ry. Hotel.
Purneah	.. Caragola, Dingra Ghat, Kathiar, Kissenganj, Purneah.
Rajshahi	.. Godagareo, Tannore.
Ranchi	.. Ranchi.
Rungpore	.. Kurigram, Rungpore.
Santhal Pergunnahs	.. Dumka, Madhupur, Rajmehal, Sahabgunge, Suri, Birbhoom.
Saran	.. Chupra, Gopalgunge, Madhubini, Siwan.
Shahabad	.. Arrah, Buxar, Dehree-on-Sone, Mohunia, Sassaram.
Tippera	.. Daoodkandy.
Darjeeling District	.. Senchal 6 m., Rangiroon 6½ m., Badamtam 7½ m., Kalimpong 28 m., Rissisoon 38 m., Pashoke 17½ m.
	Nepal Frontier Road—Jorpokri 13 m., Tonghe 23 m., Sandakphu 38 m., Phalut 51 m., Cheabhanjan 57½ m., Dentam 64 m., Pamiongchi 76 m., Rinchingpong 86 m., Chakung 98 m.
	Jelap Pass Road—Ari 51 m., Sadongchen 59 m., Gnatong 67 m., Namchi 17 m., Sang 37 m., Pakyong 53 m., Gantak 65 m., Tumlon 81 m., Samateh 97 m., Cheongtang 122 m.
	Teesta Valley Road—Pedong 43 m., Pashoke 17 m., Teesta Bridge 19 m., <i>via</i> Rangcet; Raing 25 m., Kalijhora 32 m.

UNITED PROVINCES OF AGRA AND OUDH.

Agra	.. Agra, Etah, Etawah, Farrakabad, Mainpuri, Shahnabad, Bewar and Muttra.
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UNITED PROVINCES OF AGRA AND OUDH—*contd.*

<i>Names of Districts.</i>	<i>Names of Dak Bungalows.</i>
Allahabad Division	.. Banda, Futtehpur, Nahaba, Hamirpur and Jaunpur.
Benares	.. Benares, Azamgarh, Basti, Ghazipur, Gorakhpur and Mirzapur.
Jhansi	.. Jalaun, Orita, Kalpi, Jhansi, Moth, Babina, Lalitpur, Tulbihat and Sena Ghat.
Kumaon Division	.. Almora, Pooce, Ramgarh, Bhimtal, Ranibagh, Dwarahat, Sumsur, Majkholi, Kathmal, Lamgurha, Morahula, Kaladunghi, Mangoli, Naini Tal, Khyrna, Ranikhet, Punwanolah, Hewulbagh, Ganore, Cassi, Takula, Debiabura, Dhanogarh, Chira, Garna Bans, Gangalihat, Naini, Bageshar, Kapkote, Lohaghat, Dhambheri, Khatce, Dwali and Furkia.
Meerut	.. Aligarh, Futtehpur, Bulandshahr, Meerut, Muzaffarnuggur, Saharanpur, Mohand, Gangoh and Roorkee.
Rohilkhund Division	.. Bareilly, Bajheri, Bijnour, Budaon, Moradabad, Daribal and Shahjehanpur.

OUDH.

Fyzabad	.. Fyzabad.
Lucknow	.. Bara-Banki.
Rae Bareli	.. Rae Bareli, Sultanpur and Partabgarh.
Sitapur	.. Sitapur and Hardoi.

PUNJAB.

Amritsar	.. Amritsar.
Bannu	.. Bannu, Ghaznikhet, Isakhel, Kalabough, Lakhi and Serai Pezu.

Names of Districts.

Dagshai	..
Dalhousie	..
Delhi	.
Dera Ghazi Khan	.
Dera Ismail Khan	.
Ferozepur	.
Garhwal	.
Gujranwala	.
Gurdaspur	.
Gurgaon	
Guzrat	
Hazara	
Hissar	
Hoshiarpur	
Jhang	

PUNJAB—*contd.**Names of Dik Bungalows.*

Dahurampur, Solon and Terai.
 Batala, Dhur, Dinangar, Dunera, Gurdaspur, Camool, Pathankot,
 Shahargarh and Shahpur.
 Delhi, Kutab and Mehrowali.
 Amdani, Dera Ghazi Khan, Janpur, Kot Ghuta, Mahamniadpur, Mongai,
 Royhan, Rojanpur, Rehha, Shaheddrin and Townsa.
 Bahal, Bhakkur, Chunda, Dero, Hathala, Karor, Kulachi, Leiah,
 Mankera, Meran, Yarick, Paniola, Fattah Khan, Kelur Kot, Tinda,
 Hedim, Chooni, Bandh, Kiri, Shamoza, Velrowah and Munikera.
 Ferozepur Cantonment and Moga.
 Adwani, Bungidhar, Chipalghat, Dadamandi, Kotdwara, Srinuggur,
 Kainur, Banghat, Pauri, Lobha and Lansdowne. There are
 also Forest Bungalows at Kirsu, Bainswara and Kirsal.
 Gujranwala and Wazirabad.
 Batala, Dhar, Dinangar, Dunera, Gurdaspur, Karnul, Pathankot,
 Shukargarh and Shahpur.
 Farrakhnaggar, Gurgaon, Palwal, Rewari and Sohna.
 Dinga, Doulatnuggur, Guzra, Khorian, Kola and Lallachusa.
 Abbottabad, Bagnotur, Changlagully, Dangagully, Garhi, Habibuly,
 Haripur, Khandiani, Khanpur, Kohala, Koleka, Mansehra and
 Mari.
 Futtehabad, Hensee and Hissar.
 Bharwani, Guzraib and Hoshiarpur.
 Chap Barere, Chariol, Jhang, Kot-in-shah, Shoikot and Toba Tek-Singh.

PUNJAB—*contd.*

<i>Names of Districts.</i>	<i>Names of Dik Bungalows.</i>
Jhilm	.. Abbottabad, Bagnotur, Changlagully, Cangagully, Jhilm and Kalapani.
Jullundur	.. Adampur, Bunga, Jullundur Cantonments, Nakodar, Nurmahol, Phagwarah, Phillour, Kahon, Ratarpur and Shahkote.
Kangra	.. Badwans, Bagahoo, Bajaora, Bijnath, Bishit, Chui, Dadh, Dalarsh, Dard, Dera, Dharmsala, Dheloo, Dwara, Jatingri, Jibi, Kangra, Karoon, Kokser, Kot Kotla, Larji, Littlepur, Mangloor, Nurpur, Palampur, Plack, Ralla and Sultanpur.
Karnal	.. Karnal and Paniput.
Kohat	.. Bahadur Khan, Banda, Dhodha, Gandiaur, Gombat, Hangu, Khowaja Khizir, Khushalgarh, Kohat, Lachi, Litamar, Mir Kailan, Nizampur, Surizai, Thall and Togh.
Lahore	.. Lahore and Mian Mir.
Ludhiana	.. Ludhiana.
Montgomery	.. Chichawatni, Montgomery and Okara.
Multan	.. Multan and Sher Shah.
Murree	.. Bharakao, Chunglagully, Dimal, Dangagully and Tret.
Muzaffargarh	.. Kureshi and Muzaffargarh.
Peshawar	.. Attock, Cherat, Jumrood, Muttanee, Nisatta, Nowshera and Peshawar.
Rawalpindi	.. Attock, Barrao, Bhero, Dewal, Futtehjang, Goojur Khan, Hussan- abdal, Huttian, Jhand, Jhang, Kala-ka-Sarai, Rawalpindi, Sungjani, and Toba Tek-Singh.
Rohtak	.. Bahadur Garh, Madina and Rohtak.

Names of Districts.

Shahpur	..
Sialkot	..
Simla	..
Sirsa	..
Umballa	..
Balaghat	..
Betul	..
Bhandara	..
Bilaspur	..
Chanda	..
Chhindwara	..
Damoh	..
Hoshangabad	..
Jubbulpur	..
Mandla	..
Nagpur	..

PUNJAB—concl'd.

Names of Dāk Bungalows.

Bhera, Chock Ram Das, Jhowram Miani, Shahiwal, Shahpur, Shahpur Cantonment, Shohi and Sekersar.

Sialkot.

Bagi, Bali, Dhampur, Kiarighat, Kotegurh, Kasauli, Mahasson, Matiana, Narkunda, Phagoo, Sairee, Seong, Solon, Sungir and Throg.

Arniwala, Dabwali, Fazilka, Lamba, Molout, Narel, Odha, Peeplee, Sirsa and Sahuwala.

Uniballa Cantonment.

CENTRAL PROVINCES.

Balaghat (Combined Dāk and Inspection Bungalow).

Badnur, Multai and Shahpur.

Bhandara and Gondia.

Bilaspur.

Chanda and Warora.

Chhindwara, Ramakona, Chowrai and Pandhurna.

Damoh and Singrampur.

Hoshangabad, Itarsi, Hurda, Piparia, Singanama, Pachmarhi (Hotel, Dāk Bungalow) and Dhupgarh.

Bargi, Bhairnghat or Marble Rocks, Sihara and Katni.

Tikaria (Combined Dāk and Inspection Bungalow), and Mandla (Combined Circuit House and Dāk Bungalow).

Nagpur (Hotel D. B.) Ramtek, Kamptee, Mansar and Deolapar.

CENTRAL PROVINCES—*contd.**Names of Dak Bungalows.*

Narsinghpur and Kareli.
Khandwa and Burhanpur.
Raipur, Arrang, Tungaon and Jhalap.
Sambalpur.
Saugor, Maltono and Baroda Rehli.
Dhuma, Lakhnadone, Chapra, Seoni and Kurai.
Wardha and Hinganghat.

SHIKAR WRINKLES.

Ammunition.—For Himalayan shooting, gun cartridges should be packed in soldered tin boxes of 100 each and distributed one in each cooly load of personal baggage. Rifle cartridges are best packed in tin cases, after being previously rolled with paper after the manner of Government ammunition.

Aneroid Barometer.—For calculating heights and telling the weather, the Himalayan Aneroid Barometer is an excellent instrument.

Arsenical Soap.—Bar soap, 2 lb. ; powdered arsenic, 2 lb. ; spirit of turpentine, quantity sufficient ; shred the soap and pound it in a mortar, gradually adding the arsenic, the turps being added from time to time to prevent the arsenic from being inhaled,—a dangerous process.

Axe.—For big game shooting the shikari should carry a small steel axe with a 12-inch handle. It is useful for breaking up large game, for clearing jungle, cutting tent pegs or steps in ice and snow. A *kukri* is just as handy.

Bees.—In howdah shooting carry a rug or two as a defence against the attack of bees, whose nests are occasionally disturbed in the passage through the jungle.

Binoculars and telescopes.—Those made of aluminium are the lightest.

Blisters.—Never cut these. Always prick them sideways. Homocea is a good dressing.

Boots for hill shooting should be roomy enough to admit of two pairs of thick socks being worn : wear a thin silk or cotton pair next the skin and a woollen pair over these and you should never have a blister.

Boots for snipe shooting.—Nothing beats a stout well-made pair of half boots (*without* wide welts, which lift pounds of mud). After using, dry them in the sun, *never* near the fire. To keep them soft and serviceable, dress with Neat's foot or Castor oil after they are thoroughly dry and just before they are used again, and in the off season give them a dressing or two. A good dubbin is also to be recommended. See to the laces yourself.

Some shikaris prefer canvas boots for snipe shooting ; they let out water as fast as it comes in, are cheap, durable and light. They should have stout leather soles, with bars to prevent slipping and there should be no leather insertions in toes, heels or elsewhere.

Boots, dubbin for.—(1) Resin, 2 oz.; tallow, 1 oz.; train oil, $\frac{1}{2}$ pt.; mix. (2) Porpoise oil, $\frac{1}{2}$ pt.; tallow, $\frac{1}{2}$ lb.; mix. But nothing beats pure Neat's foot oil, the stuff sold in the bazaars as Neat's foot oil is frequently largely adulterated with mustard oil which burns leather. Dale's dubbin is also excellent.

Bugs, fleas, etc.—Never go into camp, especially in the Himalayas, without a supply of Keating's or Kemp's Circassian Insect Powder.

Camp doctoring.—For burns, dress with olive oil or, what is better, equal parts of olive oil and lime water soaked in lint and wrapped in a thick layer of cotton-wool. After two days dress with either carbonate of soda, powdered chalk, starch, or flour. To arrest slight bleeding, use Friars' Balsam, or charred cotton rags; for excessive bleeding, ligatures and plugs of rag with the balsam. Wasp and bee stings should be removed with tweezers if possible, then rub with dilute ammonia, or with the juice of a fresh cut onion. For very severe insect bites and stings, apply carbolic acid lotion in strength of 1 part to 20 of water, soaked in lint. Whisky, brandy or other spirit rubbed in often allays the irritation of mosquito bites. For scorpion or centipede stings, the oil scraped out of a tobacco pipe is a good application, or strong solution of common salt put on with a rag.

Boils can be quickly brought to a head with a mixture of soap and sugar. Blisters should always be pricked at the base and the water gently expressed. Emetics—a charge of gunpowder in a tumblerful of water, a large drink of salt and

hot water, or soap suds, or finger down the throat may be resorted to. For blistered feet, rub with spirits mixed with tallow dropped from a candle—an excellent recipe. For wounds caused by animals, open the bites or scratches, cleanse thoroughly with water and treat liberally with strong carbolic oil, and poultice if required. For chafes, use “Homoea.” For sunburn, vaseline. For chilblains in their first stage, whiskey or brandy, or any spirit well rubbed in, and as a preventive the socks soaked in spirit before being put on. For bad cases, almost any of the recognised patent medicines or equal parts of tincture of camphor and tincture of belladonna rubbed in, night and morning. Leeches must be removed with salt, and if there is profuse bleeding, it should be treated with lint dipped in spirits of wine or tincture of iron applied with a camel’s hair brush. For bug bites, vinegar and water. For all strains and sprains, Elliman’s embrocation ; or Bow’s liniment or weak arnica lotion in the proportion of 60 minims to 8 oz. of water.

Camp fire, the.—The logs for the camp fire should be arranged like radii of a circle, the fire forming the centre and the logs overlapping one another on the fire ; they must be pushed inwards as their ends become burnt.

Camp ovens.—There are two useful styles : (1) Dig a small deep hole in the ground, wider at the bottom than at the top, which should not be more than a foot in diameter, plaster it round with clay ; light a fire in it and keep it up until the pit has become red-hot round the sides. Remove ashes and embers, place your bread

at the bottom, cover the mouth with a stone or a deckchie cover, and keep the air out by putting clay round it. (2) Is made on the same principle but with stones or bricks above the ground and covered inside with clay, and outside with earth or mud. A kerosine tin makes quite a good camp oven.

Camp, site for.—High ground and shade, proximity to water and absence of scrub and dense vegetation are the chief points to consider. The tent should be occasionally shifted, a change of flooring being desirable. Servants' tents, kitchen and stables should be pitched to leeward if possible.

Clothes, to dry.—Make a rough tent-shaped framework of branches, maintain a slow fire, of charcoal for choice, in the centre of the enclosure and arrange the clothes over the framework.

Clothing.—Must be left to individual taste, but the following articles are recommended for shooting in the Himalayas. Cardigan jacket or waistcoat, chamois leather vest, woollen gloves, ulster, waterproof coat, Balaclava cap, leggings or putties, woollen socks, flannel belts for sleeping in, and the usual flannel underwear. For snipe shooting shorts coming fairly over the knee are infinitely more comfortable than knickerbockers or breeches of any style.

Elephant, height to calculate.—Twice round an elephant's foot gives his height within a fraction of an inch. Multiply the diameter by 6. Thus a footprint 1 foot in diameter will be practically 3 feet in circumference, double this—height, 6 feet.

Feet, care of the.—In long marches over dry ground powdered boracic or boric acid or any Talcum powder, such as Yardley's, dusted well in the sock, especially at heel and toe and between the toes of the foot, will prevent many a blister. Soap and vaseline are also good.

Before going out snipe shooting, a good rubbing of the legs and feet with mustard and eucalyptus oil in equal parts is a good tip. Soaking the feet in strong brine or a strong alum solution hardens them. Changing the socks from one foot to the other every 10 miles is another good tip.

Filter.—The best for camp use are the Chamberlain, Pasteur or the Berkefeld.

Fireproofing tents, cordage and wood.—Boric acid, 6 lb.; sal-ammoniac, 15 lb.; pure borax, 3 lb.; water, 100 lb. Mix and saturate the articles.

Fish, to calculate weight of.—The cube of a fish's length gives his weight in lb.; it is a rough and ready method, but it is near enough. Here is another formula—Length plus one-third length multiplied by the square of the girth, and divided by 1,000. As thus,—with two fish of 40 and 30 inches respectively it works out as follows:—

$$\begin{array}{rcl}
 40 + \frac{13}{3} \text{ (exclg. fractions)} = 53 \frac{1}{3} & \left. \begin{array}{l} 53 \times 400 = 21,200 \\ 20^2 = 400 \end{array} \right\} \text{divided by } 1,000 = 21 & 39 + 13 = 52; \quad 52 \times 324 = 16,848 \text{ divi-} \\
 & & 18^2 = 324 \quad \text{ded by } 1,000 = 16.8 \\
 \text{Weight of first fish, 21 lb.} & & \text{Weight of second fish nearly 17 lb.}
 \end{array}$$

Fishing box.—A very compact and handy box to hold fishing gear is made as follows :—Material, japanned tin. Length, 10 inches ; width, 5 inches ; depth, 6 inches ; depth of lid, $1\frac{1}{4}$ inch. The bottom of the box is divided into two or three compartments for reeds and spoons ; on this rests a tray fitted for artificial baits, etc., and on this a second tray partitioned off at one end for plummets, lead wire, gimp, swivels, etc., and having two partitions down the sides for floats, the centre being divided into compartments for hooks. In the lid, secured by hinged doors, are compartments for traces and a fly book.

Fishing lines, to waterproof.—Two parts boiled linseed oil, one part gold size ; put in bottle and shake well when it is ready for use. Apply with flannel. Expose line to air and dry. After using the line two or three times repeat.

Fly tying, colourless wax for.—Melt some white rosin and add a little castor oil. When well melted, stir well, and add oil according to season of the year.

Goggles are extremely useful in the Himalayas when working on snow. Indian servants should always be provided with them as they seem predisposed to snow blindness. They are also of great comfort in the hot weather on the plains, their use tending to reduce the temperature of the body.

Gum covers of waterproof material are very useful when shooting in the Himalayas.

Guns, to clean, and preserve.—Use “Orite” made by Messrs. P. Orr & Sons, Madras, or B. S. A., or Vicker’s “Saffie paste.” The “Three-in-One” oil is also good for barrels, locks, and fishing reels, etc., it prevents and removes rust.

Hallal, the.—Left to themselves natives, in performing this rite, will usually cut an animal’s throat by slashing it from ear to ear close under the jaw, utterly ruining the head for mounting. A hunting knife should be used, and it should be plunged into the throat from one side, just at the junction of the neck and shoulder if properly done, the double-edged knife will effectually sever veins and arteries.

Horns, to preserve.—When the skulls are dry, saw off the tops of the standards leaving only half length to support the horns. Horn and core should be poisoned with arsenic and corrosive sublimate, or the following method may be adopted :—Detach the horn from the core and liberally apply arsenical soap to the core and inside of the horn. The arsenical soap may be made thin enough to apply with a brush by adding buttermilk or water. If, at the time of application, the horn and core are fresh and not perfectly dry, a second application will be necessary when dry. There is no need to saturate the core—external application being sufficient.

Howdah accessories.—Refreshments in case of separation from the line, umbrella waterproof sheet and a couple of rugs.

Hunting knives.—An ordinary skinning knife and “bowie” shaped hunting knife are useful accessories.

Shells, useful articles for the.—Shikar knife, cartridge extractor, whistle, pull through, rags, and stout string, which can be carried in the pocket or cartridge bag. Also a packet of cheap cigarettes for your men, a much appreciated luxury.

Shell itch.—Caused by insect bites is often a most irritating nuisance. A liberal rubbing in of mustard on knees, legs and feet minimises and often prevent trouble.

Kit bags.—Made of Willesden waterproof canvas with a double mouth, the inner closing with a lace and the outer with a chain and lock, are excellent for clothes and personal effects.

Leaky tents.—Having discovered the leak, run the finger along the inside from the hole downwards towards the curtain until a wet streak is made. This will usually prevent dripping.

Locks of guns require occasional careful inspection. For the working parts use the best Rangoon oil.

Malaria.—May be prevented by sleeping to leeward of a good fire. Quinine tablets are useful.

Matches should be carried in bottles or air-tight tins.

Measurements.—Much difference of opinion exists as to the *proper* way to measure big game on the field. But it is believed that the following method has the approval of the majority. Taking a tiger as our subject, let his tail and nose be pulled out so as to have them as nearly as possible in a straight line. Drive pegs in at the tip of the nose and the tail, one close into the root of the tail, and one at the junction of the head and neck. Place the forepaws in a standing position and drive a peg in at the shoulders. Then take the following measurements :—
 (1) Length between tip of nose and tip of tail in a straight line between the pegs.
 (2) Length from tip of nose to tip of tail, following the curves of the head; neck, shoulders and body.
 (3) Length of tail from root to tip.
 (4) Length of head from nose tip to nape.
 (5) Girths of upper arm, forearm, body, and head across the zygomatic arches.
 (6) Height at shoulder from the peg at the shoulders to the tip of the extended paw.
 (7) Ditto with the paw flexed and the leg straight as the animal were standing.
 (8) Length of hind leg from stifle joint to toe. Then, if possible, the weight, not cleaned, and cleaned, and afterwards the length, breadth, height, and weight of the cleaned skull.

Measuring tape.—The most durable are of the metal self-winding sort. They should be twelve feet long.

Moths in skins may be kept away by borax, naphthaline, or the dried leaves of patchouli known in the *bazaar* as *pocha puttha*.

Mosquito curtain.—A handy arrangement is a cane ring from which the curtain can be suspended ; the cane can be carried straight when not in use.

Mosquitoes et hoc.—There are many so-called preventives of insect attack and our arch-enemies the mosquito, the sandfly, and the midge have constant war made upon them by inventors of insecticides. I have tried several,—but find none equal to “Muscatol.” It is sweet-smelling, harmless, not greasy, antiseptic and efficacious. Anoint your face, neck and hands with “Muscatol” and you may sit up all night in a *machan*, fish all day, or repose in your tent with assured immunity from bites. It is really wonderful stuff.

Payments.—Make all payments to beaters, villagers, coolies and shopmen, and dispense all *bucksheesh* personally. This saves immense trouble to yourself and those who come after you.

Pull-through, the.—Drop the plummet in at the breech and pull out from the muzzle.

Rust, to prevent.—Parraffin or mercurial ointment is good ; so is the “Three-in-One” oil.

Sandflies will penetrate ordinary mosquito curtains ; where they abound use nets of fine *mul*.

Scrubs' Ammonia in the bath, hot or cold, after the day's shoot, is almost magical in its effect.

Servants.—The fewer the better. One good general servant who can cook is enough. Feed and clothe him well, and keep him in good humour. Shikaris, trackers, gun carriers, coolies, messengers, etc., are best hired locally.

Sight-protectors are necessary for rifles when in the gun cases, especially in hill shooting, where there is a deal of rough jolting during the marches.

Skinning and drying pelts.—See *Practical Taxidermy* by Montagu Brown, F.Z.S., which gives full instructions with diagrams for removing the skins of animals and birds, preserving and mounting specimens in camp and at home, with full particulars of the various well-known processes and details about certain reliable patent stuffs. Some years ago Messrs. M. R. Murray & Co., taxidermists and tanners of Harda, C. P., published in their catalogue some useful hints on the subject of camp taxidermy, from which I extract the following with acknowledgments to the firm.

Always dry any skin in *the shade*. Never leave fat on a skin.

Rub ground alum or wood ashes on to raw side of skin when pegged out to dry. *Never* use *hot* ashes, nor apply ashes of *any sort* to the hair side.

Rub plenty of alum on the ears, lips, nose, etc., both inside and out; also to the feet of animals with claws. Arsenical soap should also be used, if possible, on the above portions to prevent insects.

Never despatch skins before they are thoroughly dry.

When ears and lips have quite dried, roll skin fur inwards with some naphthalin or camphor crystals inside, and be careful that the claws do not rub the fur.

When cutting deer heads from skin, always leave plenty of skin at throat. Never leave a skin attached to the horns. Cut up the back of the neck, and to each horn with Y-shaped cut, and dry separately.

Skulls, to bleach.—Dip for a few moments in a boiling solution of 1 lb. caustic soda and 1 gal. water, rinse thoroughly in water and rub down with pumice stone. Then expose to sulphur fumes and give a final rinsing in water.

Skulls, to macerate.—Soak in water until all the flesh and cartilage rots off changing the water frequently, care being taken to collect all teeth that may drop out. The skulls should then be bleached.

Slings for rifles.—These have their advocates and detractors. On bad ground in the hills, when both hands and feet are needed to assist progress, they are undoubtedly useful. The swivel hooks are noisy and lose their hold at awkward moments; they also mark the barrels; the bar attachment is the best and should

be placed one close to the toe of the butt and the other an inch or two in front of the fore-end.

Spear grass.—To overcome this trouble it is a good tip to wear your "woollies" inside and stout khaki drill outside—even in the coldest weather. Thus clad, spear grass can be negotiated with equanimity.

Specimen tickets.—Sportsmen naturalists should very carefully note all details on the tickets they attach to their specimens. The following particulars should be noted :—Date, locality, weather conditions, sex, estimated age, condition of animal, measurements, weapon, bullet, charge, etc. The same in the case of birds and if the nest is discovered a description thereof, its exact situation and description of the eggs.

Spinach, a substitute for.—In the hills, in early spring where vegetables are very scarce, the fresh shoots of stinging nettles make a good spinach. Wild rhubarb also is not a bad food.

Sportsman's library, the.—The following books on Indian Sport and Natural History should be on every sportsman's bookshelf :—

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|---|--|
| <p>"The Old Forest Ranger." (Maj. W. Campbell.)
 "Seonee." (Sterndale.)
 "Large and Small Game of Bengal." (Baldwin.)</p> | <p>"Tiger Shooting in India." (Rice.)
 "Wild Sports of India." (Shakespeare.)
 "Wild Men and Wild Beasts." (Gordon Cumming.)
 "The Spear and the Rifle." (Shikaree.)</p> |
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- "Denizens of the Jungle." (Sterndale.)
 "Shikar Sketches." (Moray Brown.)
 "Williamson's Oriental Sports."
 "Reminiscences of Sports in India." (Burton.)
 "Highlands of Central India." (Forsyth.)
 "Thirteen Years among the Wild Beasts of India." (Sunderson.)
 "In and Beyond the Himalayas." (S. J. Stone.)
 "Sport in the Highlands of Kashmir."
 (Darrach.)
 "Tropics and Snows." (R. G. Burton.)
 A Record of Sport in Bengal and Central Provinces. ("Expert Shikari.")
 "Good Hunting." (Ajax.)
 "Sportsman's Manual." (Lt.-Col. Tyacke.)
 "Tiger Shooting in the Doon and Alwar."
 (Col. Fife-Cookson.)
 "A Summer Ramble in the Himalayas."
 (Mountaineer.)
 "Large Game Shooting." (Kinloch.)
 "Sport in Bengal." (E. B. Baker.)
 "Hog Hunting in the East." (Newall.)
 "Twenty Years' Pigsticking in Bengal."
 (Raoul.)
 "Small Game of Bengal." (Raoul.)
 "Pigsticking." (Baden-Powell.)
 "The Big and Small Game of India."
 (Lydekker.)
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- "Rifle and Romance in the Indian Jungle."
 (Capt. A. I. R. Glasfurd.)
 "Sport and Travel." (Moray Brown.)
 "Guide to Kashmir." (Col. Ward.)
 "The Encyclopedia of Sport."
 "The Indian Field Shikar Book." (Burke.)
 "The Rod in India." (Thomas.)
 "Tank Fishing in India." (Thomas.)
 "Freshwater Fishes of India." (Beavan.)
 "Day's Fishes."
 "Angling in the Kumaon Lakes." (Surgeon-Genl. W. Walker.)
 "The Angler's Handbook."
 "The Fauna of British India." (Series.)
 "Jerdon's Mammals."
 "Mammalia of India." (Sterndale.)
 "The Deer of all Lands." (Lydekker.)
 "The Wild Oxen, Sheep and Goats of all Lands." (Lydekker.)
 "Eight Years in Ceylon." (Baker.)
 "Rifle and Hound in Ceylon." (Baker.)
 "Wild Beasts and their Ways." (Baker.)
 "Sportsman's Vade Mecum." (K. G. A. J.)
 "The Hindu Koh." (Genl. Macintyre.)
 "Bullet and Shot in Indian Forest, Plain and Hill." (G. F. M. Russell.)
 "The Sportsman's Book for India," Edited by T. G. A. A. A.

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| <p> "Jerdon's Birds."
 "The Game Birds of India and Asia." (Finn.)
 "The Water Fowl of India and Asia." (Finn.)
 "The Game Birds of India." (Oates.)
 "The Indian Ducks." (Stuart-Baker.)
 "How to know the Indian Ducks." (Finn.)
 "The Indian Waders." (Finn.)
 "Fancy Pheasants." (Finn.)
 "The Birds of Calcutta." (Finn.)
 "The Birds of Bombay." (Eha.) </p> | <p> "Birds of the Plains." (D. Dewar.)
 "The Game Shore and Water Birds of India."
 (Col. A. Le Mesurier.)
 "DeNievville's Butterflies."
 "The Art of Travel."
 "The Game Birds of India." (Hume and
 Marshall.)
 "A Bird Calendar for Northern India."
 (D. Dewar.)
 "Indian Sporting Birds." (Finn.) </p> |
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Stings.—For scorpion stings, vinegar, even if not immediately applied, is an infallible remedy; ammonia (Scrubb's will do) or onion juice for hornet, wasp or bee stings.

Tea, Russian.—Make tea in the usual way, letting it stand exactly three minutes, pour off into a receptacle to cool. When quite cold add a few slices of fresh cut lime and squeeze into it a little of the juice. Add sugar if preferred; it is better without. This is undoubtedly the best drink to work on. It can also be made with cold water, but must be allowed to stand several hours.

Note.—On no account put this tea into water bottles or receptacles made of aluminium or enamelled iron, unless you desire to drink *ink*, which is produced by the chemical action of the tannin on the aluminium, or the iron in the enamelled ware, should the latter be chipped or cracked.

Tents must be thoroughly dried before being put away. A few pounds of naphthalin rolled up with them will keep away insects.

Tents, to scour and clean.—Use "Country" soap, or a fairly strong solution of *sajeemutty* and water and scrub well. To prevent mildew, 1 lb. sulph. zinc in 40 gals. water, then add 1 lb. sal. soda, and, when dissolved, add 2 oz. tartaric acid. Soak 24 hours and dry without wringing.

Water-bag or "Chagul".—See description in chapter on Camp Equipment.

Water, muddy, to settle.—A pinch of powdered alum stirred into the water will quickly precipitate all matter held in suspension.

Water, to purify.—Use a few crystals of permanganate of potash, then boil. But this is a very rough and ready method. There are numerous sterilizing patents to be had of all chemists, such as "Cholorogen," put up in quarts or pocket-size bottles.

Water Telescope.—A long tin tube 4 or 5 inches in diameter with a piece of glass let in at the lower end, and the outside painted khaki. An interesting and useful accessory to bottom fishing in tanks.

Watch, to use as a compass.—Hold the watch flat in the hand with the hour mark then indicated at the time of day pointed directly at the sun. The point half way between that hour mark and XII will be opposite to due south in the

sky. For example, supposing it is four o'clock in the afternoon, hold the watch so that IV points straight at the sun, the mark II will indicate due south. Or suppose it is 10 o'clock in the morning, hold the watch as before till X points straight at the sun ; XI will point due south.

Wounds, bites or clawings by Carnivora.—"W," some years ago, wrote to *The Pioneer* the following excellent letter :—

I always had several boxes of dressing handy, prepared antiseptically in the following way. Each box was made up as follows :—(1) A tin box with a well fitting lid, several inches square or in diameter—a half pound tobacco tin box answers very well ; (2) half an ounce of iodoform ; (3) four ounces of boric acid (boracic acid) ; (4) two bandages, one, four feet long and two inches wide, the other half that length and breadth ; (5) a quarter of a pound of antiseptic wood wool ; (6) a small roll of adhesive plaster on linen ; and (7) a small tin caster with a movable top, similar in size and shape to the salt and pepper casters one carries into camp. (This can be made in the bazaar for a few pice.) Get your box well cleaned and dried, put the iodoform loose into it, then pack with the bandages, plaster, caster, and boric acid. The caster should first be filled with a mixture of equal parts of iodoform and boric acid, and the wood wool pressed into all the corners with clean hands. Close, seal with bands of gummed paper till perfectly air-tight and leave out in the hottest sun or near a fire for some days.

The contents are rendered quite aseptic, and will last (as long as the box is air-tight) for years. Men going out pigsticking or shooting should have two, or three of these boxes, as wounds of horses are treated in the same way as those of men.

To treat a fresh wound with the above, get about two pints of fresh clean water (boiled water if practicable and there is time), empty the boric acid powder into it, then cleanse the parts with a dab of the wool soaked in the lotion, frequently changing the wool, and lastly dry with another piece of clean wool. Dust the wound and parts around with a liberal mixture of the powder from the caster, cover with a thin pad of wool, keeping it in its place with straps of plaster, and finally cover everything with the rest of the wool and the bandage. The wound should, if possible, be quite dry when the final layer of wool is applied. If the dressings become soaked with blood or accidental moisture they must be changed, not otherwise. If the wound is punctured, the hole should be liberally filled with the dusting powder. If the injuries are severe, give a pill of opium about twice the size of a pin's head, and after a few hours' rest remove to the nearest hospital. These boxes can be made inexpensively at the nearest hospital or chemist's shop, and last for ever. Only one should be opened at a time. Remember, too, always to use clean hands and tools in dressing a wound. Another useful thing in camp is a half-ounce stoppered bottle of a four per cent. solution of cocaine for inflamed mosquito bites, wasp stings, and particularly for blows or

injuries to the eye. A few drops every hour is sufficient. The relief is very great.

SNAKE-BITES, TREATMENT FOR.

FITZSIMMONS' ANTI-VENOMOUS SERUM.

Mr. Fitzsimmons, Director of the Port Elizabeth Museum, South Africa, after years of research, has perfected a serum which, it is asserted has never failed. It is said to have saved victims of snake-bite after artificial respiration had been resorted to. This serum is prepared from horses rendered highly immune to the mixed venom of the typical poisonous snakes of India, Africa and Indo-China. It is claimed that a dose of 20 cubic centimetres will cure the worst case of snake-bite if properly injected, and that in the majority of instances 10 cubic centimetre effect a cure, even when treatment has been unduly delayed. The serum is put up in dry form and will keep in perfect condition for a lifetime. Liquid serum is also obtainable, but this will not be effective after 2 years: it has this advantage over the dry serum in that it is always ready for instant use, whereas the dry stuff requires some little time to dissolve. It is therefore recommended that at least one full dose of each be kept on hand. The serum can be had from Messrs. Smith, Stanistreet & Co., Ltd., Calcutta, the Sole Agents for India.

PERMANGANATE OF POTASH.

Messrs. Smith, Stanistreet & Co., Ltd., also provide the well known permanganate of potash and lancet outfit—very cheap and efficacious and extremely handy for Camp use.

This instrument consists of a sheathed lancet with a space at its base containing crystals of permanganate of potash. It was designed by Sir Lauder Brunton as an easily portable and immediately available instrument for the treatment of snake-bites; and was used by Sir Leonard Rogers in a series of experiments which demonstrated, in the first place, that permanganate of potash when mixed with venoms of any class of poisonous snakes immediately destroys their action, and renders them inert and harmless, when injected into susceptible animals in quantities usually equivalent to many times a fatal dose; and, secondly, that animals treated by the method described below at from half a minute to half an hour after receiving from two to ten fatal doses of venom could be saved from an otherwise inevitable death.

In a case of snake-bite, if the wound is on a limb, first apply a ligature between the bite and the body sufficiently tightly to stop the circulation, in order to prevent any further absorption of the poison into the circulation. This may be done by tying a handkerchief or piece of cotton clothing loosely round the limb, passing a piece of stick through it, and twisting it round until the pulse cannot be felt beyond

the ligature. Then, with the lancet make a cut through the mark of each fang, in the long axis of the limb, about two inches in length and from one-third to half an inch in depth, and raise the edges of each wound slightly so as to form small pockets. A red watery effusion will mark the site of the venom. Check any slight bleeding by gentle pressure on the wounds and then empty the crystals of permanganate into the wounds (the amount of crystals the lancet holds would be at least enough for the treatment of two cases of snake-bite) moisten with a few drops of water or saliva partially to dissolve the crystals, and thoroughly rub them in for several minutes until the whole surface of the wound is blackened: apply a bandage (and if available a dressing) tightly over the wounds and then remove the ligature from the limb.

By this method of treatment any venom, which has not already entered the general circulation, is destroyed locally; and if this is done before a fatal dose has been absorbed, the life of the patient may be saved. After the treatment the patient should be kept quite quiet in the recumbent posture, till medical advice be obtained or he be carried to the nearest hospital.

THE INDIAN GAME PROTECTION ACT.

ACT No. VIII OF 1912.

Passed by the Governor-General of India in Council. [*Received the assent of the Governor-General on the 18th September, 1912.*]

An Act to make better provision for the protection and preservation of certain wild birds and animals.

WHEREAS it is expedient to make better provision for the protection and preservation of certain wild birds and animals: It is hereby enacted as follows:—

1. *Short title and extent.*—(1) This Act may be called the Wild Birds and Animals Protection Act, 1912; and

(2) It extends to the whole of British India, including British Baluchistan, the Sonthal Parganas and the Pargana of Spiti.

2. *Application of Act.*—(1) This Act applies, in the first instance, to the birds and animals specified in the Schedule, when in their wild state.

(2) The Local Government may, by notification in the local official Gazette, apply the provisions of this Act to any kind of wild bird or animal, other than those specified in the Schedule, which, in its opinion, it is desirable to protect or preserve.

3. The Local Government may, by notification in the local official Gazette, declare the whole year or any part thereof to be a close time throughout the whole or any part of its territories for any kind of wild bird or animal to which this Act applies, or for female or immature wild birds or animals of such kind and, subject to the provisions hereinafter contained, during such close time, and within the areas specified in such notification, it shall be unlawful—

(a) to capture any such bird or animal, or to kill any such bird or animal which has not been captured before the commencement of such close time ;

(b) to sell or buy, or offer to sell or buy, or to possess, any such bird or animal which has not been captured or killed before the commencement of such close time, or the flesh thereof ; and

(c) if any plumage has been taken from any such bird captured or killed during such close time, to sell or buy, or to offer to sell or buy, or to possess, such plumage.

4. *Penalties*.—(1) Whoever does, or attempts to do, any act in contravention of Section 3, shall be punishable with fine which may extend to fifty rupees.

(2) Whoever, having already been convicted of an offence under this section is again convicted thereunder shall, on every subsequent conviction, be punishable with imprisonment for a term which may extend to one month, or with fine which may extend to one hundred rupees, or with both.

5. *Confiscation*.—(1) When any person is convicted of an offence punishable under this Act, the convicting Magistrate may direct that any bird or animal in respect of which such offence has been committed, or the flesh or any other part of such bird or animal, shall be confiscated.

(2) Such confiscation may be in addition to the other punishment provided by Section 4 for such offence.

6. *Cognizance of offences*.—No Court inferior to that of a Presidency Magistrate or a Magistrate of the second class shall try any offence against this Act.

7. *Power to grant exemption*.—Where the Local Government is of opinion that, in the interests of scientific research, such a course is desirable, it may grant to any

person a license, subject to such restrictions and conditions as it may impose, entitling the holder thereof to do any act which is by Section 3 declared to be unlawful.

8. *Savings*.—Nothing in this Act shall be deemed to apply to the capture or killing of a wild animal by any person in defence of himself or any other person, or to the capture or killing of any wild bird or animal in *bona fide* defence of property.

9. *XX of 1887 Repeal*.—The Wild Birds Protection Act, 1887, is hereby repealed.

THE SCHEDULE.

- (i) Bustards, ducks, floricans, jungle fowl, partridges, peafowl, pheasants, pigeons, quail, sand-grouse, painted snipe, spur-fowl, wood-cock, herons, egrets, rollers and kingfishers.
- (ii) Antelopes, asses, bison, buffaloes, deer, gazelles, goats, hares, oxen, rhinoceroses and sheep.

GAME REGULATIONS.

ASSAM.

No. 1344R. *The 26th March 1915.*—Under the provisions of Sections 24 (c) and 72 of the Assam Forest Regulation, VII of 1891, and in supersession of all previous orders on the subject, the Chief Commissioner is pleased to make the following rules for the regulation of sport in reserved forests :—

RULES FOR THE REGULATION OF SPORT IN RESERVED FORESTS.

1. The killing of fish by the use of nets, traps, explosives or poison is absolutely prohibited.

2. The following close seasons are prescribed :—

Species.					Close time.
<i>I.—Wild Birds.</i>					
Duck	..	..	..	..	From the 15th April to the 30th September.
Hen, floricane	..	..	..	..	The whole year.

Species.	Close time.
<i>I.—Wild Birds—contd.</i>	
Cock, florican	From the 1st April to the 30th September.
Black partridge	Ditto Ditto
Swamp partridge	From the 1st March to the 30th September.
Jungle fowl	Ditto Ditto
Peacock	The whole year except in the district of Goalpara, where the close time shall be from the 1st March to the 30th September.
Peahen	The whole year.
Pheasant	From the 1st March to the 30th September.
Pigeon and doves	From the 1st March to the 15th June.
Quail	From the 1st March to the 30th September.
Herons, egrets, rollers and kingfishers	The whole year.
Teal	From the 15th April to the 30th September.
Hoopoe, Rufous short-toed Lark or Ortolan, Black Drongo or King Crow, Jungle Babbler or Seven Sisters, Black-headed Oriole, Grey-headed Mynah, Common Mynah, Pied Mynah, Common Hawk, Cuckoo, Woodpeckers of all species, Bhimraj and Bee-eaters. -	The whole year.
Marabou crane	Ditto.

Species.	Close time.
<i>II.—Wild Animals.</i>	
Antelopes (serow, takin and goral)	} From the 1st June to the 31st October.
Bison (mithan)	
Buffalo	
Deer, Hares	
Females, other than female hares, and immature males of the above species, hornless deer and deer with horns in velvet. Rhinoceros except with the special sanction of the Chief Commissioner, when the latter is satisfied that Rhinoceroses have become plentiful in any locality.	The whole year.

The killing or trapping of any of the above within the close season prescribed in each case is prohibited.

3. Hunting, shooting, trapping or fishing within a reserved forest is prohibited except by a permit-holder and subject to the provisions of Rules 1 and 2. In the case of hunting or shooting in reserved forests of game, the shooting of which is not prohibited under Rules 7 and 8, this permit will be granted by the Divisional Forest Officer in Form A appended and subject to the conditions specified in

these rules and to those printed on the permit and on payment of the following fees :—

					Rs.
Non-residents of Assam	..	..	..	..	50
Residents of Assam outside the district in which the forests are situated				..	30
Residents of the district	..	..	..	..	20

Provided that for reasons to be recorded in writing the Divisional Forest Officer may, in any case, decline to issue a permit.

4. In addition to the permit fee mentioned in Rule 3 the following fee is payable for animals hereinafter mentioned killed by the permit-holder :—

Animal.					For the first animal killed.	For the second and every subsequent animal killed under the same permit.
					Rs.	Rs.
Buffalo	..	..	..	..	10	20
Bison	..	..	..	..	5	10

Provided that by order of the Local Administration these fees may be reduced if game is plentiful or causes injury to crops in the vicinity of the forest.

5. In the case of fishing the permit under Rule 3 will be in Form B appended and be subject to the conditions printed on it and be issued on payment of the following fees :—

						Rs.
For one day	..	..	..	..	..	1
For one month	..	..	..	..	..	10
For two months	..	..	..	..	..	20
For one season	..	..	..	..	..	30

6. Gazetted Forest Officers, Officers of the Assam Commission, and Gazetted Officers of the Assam Police and of the Survey of India, and of the Public Works Department, Assam, when travelling on duty, are exempted from taking out the permits referred to in Rules 3 and 5, but are bound by Rules 1 and 2 and by any orders issued under Rule 10.

7. The Conservator of Forests may, subject to the previous approval of the Chief Commissioner, declare any reserved forest or portion thereof to be a sanctuary. In such sanctuaries hunting, shooting or trapping is altogether prohibited, except under special permits which may be granted by the Conservator to approved sportsmen for the exclusive purpose of hunting and killing carnivorous animals. Permits

for fishing may be granted, with the previous sanction of the Conservator of Forests by the Divisional Forest Officer, in Form B and on payment of the fees prescribed in Rule 5.

8. The Conservator of Forests may, with the previous approval of the Chief Commissioner, declare any reserved forest or portion thereof, to be a sanctuary for the purpose of protecting particular kinds of game. Shooting of other game in this second class of sanctuary may be allowed on permits in Form A, which may be granted by the Divisional Forest Officer. A list of the forests closed under this and the preceding rule shall be published in the *Assam Gazette* on or in the first issue after the 1st October in every year, and copies shall be displayed for public information in the offices of the Deputy Commissioners and Divisional Forest Officers of the different districts. (No. 3058R., of 4th September, 1916.)

9. At the time a permit is taken out a declaration shall be made by the permit-holder as to the animals, other than carnivorous, which he desires to shoot.

10. If the permit fixes a limit to the number of animals to be killed, the permit-holder shall be bound by such limit.

11. If any person infringes any of the above rules or any of the conditions of his permit, he will be punishable under Section 24 of the Assam Forest Regulation (VII of 1891).

Permit A.*Permit to hunt and shoot granted under Rules 3 and 8.**(Obverse.)*

<i>Counterfoil.</i>			
No.	dated	Duplicate for Range Officer.	Triplicate for permit-holder.
Name of permit-holder—			
Status—			
Fee paid for license—			
Name of followers—			
Period for which valid—			
From	to		
Names of forest or portion thereof for which the permit is granted, with boundaries thereof—			

(Reverse.)

(1) The maximum number of the following animals that may be shot under this permit is—

Name.				Number.	Fee paid under Rule 4, of these Rules.
Buffalo		
Bison		

(2) Name of Forest Guard accompanying the party with rate of pay—

Name_____

Pay Rs. per mensem.

(3) The holder of this permit shall observe the following close seasons:—

Species,	Close time.
<i>I.—Wild Birds.</i>	
Duck	From the 15th April to the 30th September.
Hen, florican	The whole year.
Cock, florican	From the 1st April to the 30th September.
Black partridge	Ditto Ditto
Swamp partridge	From the 1st March to the 30th September.
Jungle fowl	Ditto Ditto
Peacock	The whole year except in the district of Goal-para, where the close time shall be from the 1st March to the 30th September.
Peahen	The whole year.
Pheasant	From the 1st March to the 30th September.
Pigeon	From the 1st March to the 15th June.
Quail	From the 1st March to the 30th September.

Species.	Close time,
<i>I.—Wild Birds—contd.</i>	
Herons, egrets, rollers and kingfishers ..	The whole year.
Teal	From the 15th April to the 30th September.
Hoopoe, Rufous short-toed Lark or Ortolan, Black Drongo or King Crow, Jungle Babbler or Seven Sisters, Black-headed Oriole, Grey-headed Mynah, Common Mynah, Pied Mynah, Common Hawk, Cuckoo, Woodpeckers of all species, Bhimraj and Bee-eaters.	The whole year.
Marabou Crane	Ditto.
<i>II.—Wild Animals.</i>	
Antelopes (serow, takin and gooral) ..	} From the 1st June to the 31st October.
Bison (mithan)	
Buffalo	
Deer, Hares	
Females, other than female hares, and immature males of the above species, hornless deer and deer with horns in velvet. Rhinoceros except with the special sanction of the Chief Commis- sioner, when the latter is satisfied that Rhino- ceroses have become plentiful in any locality.	The whole year.

The killing or trapping of any of the above within the close season prescribed in each case is prohibited.

(4) The holder of this permit shall camp only on such regular camping grounds as may have been set apart by the Divisional Forest Officer or in places specially pointed out to him by a Forest Officer.

(5) This permit may be cancelled at any time by order of the Divisional Forest Officer. Any breach of the Forest Regulation or of any rules made under that Regulation, if committed by the holder of this permit or any of his retainers or followers, shall render the permit liable to cancellation. Permits are liable to be declared invalid in regard to any particular forest in case of fire breaking out in any part of that forest.

(6) The holder of this permit is not exempted from liability under the Forest Regulation or any other law for anything done in contravention of such Regulation or law or for any damage caused by him, his retainers or followers.

(7) The holder of this permit may not enter any reserved forest without previously giving 24 hours' notice to the nearest Forest Officer.

(8) The holder of this permit shall pay the pay of a forest guard as entered in Condition 2 of this permit, who will accompany him and his camp during the time he is within the limits of reserved forests. The duty of the forest guard is to see

that none of the forest rules is infringed by the holder of this permit or his followers.

(9) This permit is non-transferable.

(10) Wounded game may be followed into another portion of this forest than that to which this permit applies.

Form B.

Permit to fish granted under Rules 3 and 5.

Fee Rs.

(Obverse.)

Permit to fish by rod and line only in the undermentioned rivers within the boundaries specified below under Rules 3 and 5 of the Rules for the regulation of sport in reserved forests issued under the Chief Commissioner's Notification No. , dated , subject to the conditions specified on the reverse.

(a) To

(b) Of

The day of 19

Signature and designation of Officer granting the permit.

(Reverse.)

The killing of fish by the use of nets, explosives or poison is absolutely prohibited.

2. The holder of this permit is not permitted to shoot or to carry firearms within the forest specified in the Schedule below.

Schedule of Boundaries.

BALUCHISTAN.

The following rules have been prescribed to regulate hunting, shooting and fishing in the State forests of British Baluchistan.

1. The Deputy Commissioner having charge of the Local area within the limits of which any State forest or part of a State forest is situated may, in his discretion grant licenses, to hunt, shoot or fish in such State forest or part of a State forest, subject to the conditions on the reverse of such licenses, and may at any time, for good and sufficient reason, cancel any such license.

2. Licenses to shoot shall not be granted except on payment of fees at the subjoined rates for each person thereby authorized to shoot for any of the following

periods, namely, not exceeding fifteen days, Re. 1; exceeding fifteen days but not exceeding one month, Rs. 3; exceeding one month but not exceeding three months, Rs. 8; exceeding three months but not exceeding six months, Rs. 15.

3. Every person who holds a license of the nature specified in Rule 1 and who is found hunting, shooting or fishing in any State forest, shall, on the demand of any Forest Officer or Police Officer immediately produce such license.

4. Where any person holding a license granted under these rules:—

- (a) fails to produce such license on demand duly made under Rule 3, or
- (b) contravenes any direction duly given under Rule 4, his license shall be cancelled and he shall be punishable with fine which may extend to fifty rupees and, where the breach of rule is a continuing breach, with a further fine which may extend to five rupees for every day after the first during which the breach continues.

Game Preservation Rules.

The Hon'ble the Agent to the Governor-General and Chief Commissioner has prescribed the following rules for the preservation of Game in Baluchistan:—

1. The commission of any of the following Acts is prohibited:—

- (a) the poisoning or dynamiting of rivers and other waters;

(b) the snaring or trapping of any of the following game birds or animals, viz. :—

- (1) Chikor, (2) sisi, (3) black partridge, (4) grey partridge, (5) duck, (6) hares, and

(c) the driving in herds for the purpose of killing them with men or dogs in the snow or otherwise of any of the following animals :—

- (1) Oorial (Gadh), (2) markhor, (3) ibex, (4) ravine deer.

(d) the shooting of the female or young of any of the following animals :—

- (1) Oorial (Gadh), (2) markhor, (3) ibex, (4) ravine deer.

(e) the sale in cantonments, stations, station bazaars and municipal limits of any of the following game birds and animals which have been snared or trapped :—

- (1) Chikor, (2) sisi, (3) black partridge, (4) grey partridge, (5) duck, (6) hares.

(f) the shooting between the 1st of March and 31st of August of any of the following game birds and animals :—

- (1) Chikor, (2) sisi, (3) black partridge, (4) grey partridge, (5) duck, (6) hare.

Note.—But the prohibited period is from March 1st to August 19th for—

(1) The Ziarat valley, i.e., the catchment area of the stream, including the mountains on either side, up to the watershed, from the Ziarat Tsarai *kotal* down to the mouth of the Kowas Tangi; (2) the valley to the east of the aforesaid *kotal* down to the mouth of Karbi Kats Tangi; (3) the valley along which runs the road from Ziarat to Mangi, as far as Murdar Kach; (4) the Kowas Tangi and the Mana valley up to the watershed to the south-east of Chasan Mana, and thence the valley of the stream running through Much Tangi to the mouth of Karbi Kats; (5) the whole of the Koshki plateau below Prospect Point.

N. B.—I. Nothing hereinbefore contained dispenses persons wishing to shoot chikor within the area of a reserved forest from obtaining from the Deputy Commissioner of the District a license to shoot, as required by the British Baluchistan Forest Regulation.

II. Any person found guilty of any of the offences enumerated in Rule I shall be punishable with fine which may extend to rupees fifty, and when the offence is a continuing one with a further fine which may extend to five rupees for every day after the first during which the offence is continued.

BENGAL.

Notification No. 839 For.—*The 23rd January 1915.*—In exercise of the powers conferred by Clause (i) of Section 25 and Clause (j) of Section 31 of the Indian

Forest Act, 1878 (VII of 1878), the Governor in Council is pleased to prescribe the following rules to regulate hunting, shooting, fishing, the poisoning of water and the setting of traps or snares within the Reserved and Protected Forests in the Presidency of Bengal.

2. The following Notifications are hereby cancelled, in so far as they apply to Bengal as at present constituted, namely :—

- (1) Notification No. 177 T.—R., dated the 18th May, 1895, as amended by subsequent notifications ;
- (2) Notifications Nos. 1992 and 1994 For., dated the 6th April, 1907 ; and
- (3) Notification No. 943 M.R., dated the 26th November, 1912.

Rules to regulate Hunting, Shooting and Fishing within the Reserved and Protected Forests in Bengal.

Prohibition as to killing of fish.—1. No person shall, within the Reserved and Protected Forests in Bengal :—

- (a) poison any river or other water ;
- (b) kill fish by any explosive ;
- (c) dam and bale water ; or
- (d) use small nets to catch fish.

2. *Close season.*—The following close seasons shall be observed within the said forests :—

Rhinoceros, female buffalo and female bison and in the Jalpaiguri District, male bison	..	Whole year.
Male bison in other districts	..	1st May to 31st August.
All stags with horns not in velvet and male antelopes	..	1st May to 30th September.
Hornless male deer or deer when with horns in velvet and females of all deer and antelopes	..	Whole year.
Here	..	1st May to 30th September.
All pigeons and peafowl	..	1st March to 30th September.
Jungle fowl	..	} 15th March to 30th September.
Pheasants, male florican and partridges	..	
Hen florican	..	Whole year.

The killing or snaring of any of the above within the close season prescribed in each case is prohibited.

3. *Classification of forests.*—For the purposes of these rules forests shall be divided into three classes, namely—

Class I.—Forests in which hunting, shooting, trapping or fishing is permissible only under a permit in Form A, appended.

Class II.—Forests in which hunting, shooting, trapping or fishing is permissible only under a permit in Form B, appended.

Class III.—Forests in which all hunting, shooting, trapping or fishing is prohibited in order to prevent the extinction of any species, or to form a sanctuary for game, or for any other reason.

All forests shall be considered as belonging to Class I unless the contrary is specially notified by the Local Government in the *Calcutta Gazette* at the instance of the Commissioner of the Division or the Conservator of Forests through the Commissioner of the Division.

4. *Permits in case of forests falling under Class I: Fees therefor.*—In the case of forests falling under Class I, the necessary permit may be granted by the District Officer or by the Divisional Forest Officer in Form A, appended, on payment of a fee of Rs. 10, for the period between the date on which the permit is granted and the 30th June following the date of its issue, and shall be non-transferable. But except in the Sundarbans Forest Division, no permit in Form A shall be held to authorise hunting, shooting, trapping or fishing in any forest between the 1st February and the 1st July without the express permission of the authority granting the permit. Whenever such permission is given the fact shall be endorsed on the permit.

5. *Permits in case of forests falling under Class II.*—In the case of forests falling under Class II, the requisite permit in Form B, appended, on payment of the requisite fee may be granted by the Conservator of Forests, the District Officer or the Divisional Forest Officer.

6. *Conditions and limitations of such permits.*—Permits under Rule 5 shall not ordinarily be granted in Reserved or Protected Forests, except to approved sportsmen and shikaris, for the exclusive purpose of hunting and killing carnivorous animals and such other animals as may be expressly mentioned in the permit. These permits shall be (a) non-transferable, (b) available for the period specified therein, not exceeding twelve months, (c) may apply to a portion or the whole of any one forest, and (d) shall be capable of extension to any part of the Reserved or Protected Forests of the district concerned outside the area specified on the permit, for any time within the period covered by the permit, by an endorsement in this behalf being made thereon by an officer authorized to grant a permit under Rule 5 and having authority over the area to which the permit is extended :

Provided that wounded game may be followed into another portion of a forest than that to which the permit applies.

7. *Extension of permit for Class I forests to Class II forests.*—The holder of a permit in Form A, to hunt, shoot, trap or fish in forests of Class I of any Forest

Division may be allowed by the Conservator of Forests to shoot carnivorous animals, barking deer, pig, hare or winged game, or to fish in all or any of the forests of Class II included in the same Division, during the currency of his permit in Form A without extra charge.

8. *Exemption of certain officers when on duty and Heads of Departments.*—Gazetted Forest Officers, Officers of the Imperial and Provincial Civil Services and Gazetted Officers of the Bengal Police having to discharge duties under the Forest Act or Rules made thereunder within the district or subdivision of the district in which the Reserved or Protected Forest concerned is situated and Heads of Departments shall be exempted from taking out permits, but shall be bound by Rules 1 and 2 and by any orders issued under Rule 14.

9. *Exemption in case of tidal waters.*—No permit shall be required for fishing in tidal waters.

10. *Fees for special permits.*—Fees shall be charged for special permits issued under Rule 5 according to the following scale:—

					Rs.
To non-residents of Bengal	..	..	..	..	50
Residents of Bengal outside the district in which the forests are situated	..	..	..	..	30
Residents of the district	..	..	..	..	20

“Provided that the fees payable by members of Fishing Associations holding leases approved by Government shall be liable to variation from the scale prescribed by this rule in accordance with the terms of such lease.” (*Notification No. 8928 For., dated 7th September, 1915.*)

Provided also that every holder of a special permit shall also pay for a Forest Guard to accompany him and his camp during the time he is within any Reserved or Protected Forest specified in his permit, if the Divisional Forest Officer appoints a Forest Guard to accompany him.

11. *Charges for killing bison.*—In addition to the permit fee, where a permit fee is required, there shall be a charge of Rs. 10 for the first bison killed and a charge of Rs. 20 for each subsequent one killed under the same permit.

12. *Prohibition of search for game prior to date of permit.*—No person who applies for a permit, whether under Form A or Form B, shall employ any one to search for game in a Reserved or Protected Forest prior to the date of his permit.

13. *Prior declaration as to game sought after.*—At the time a permit in Form B is taken out, a declaration shall be made by the permit-holder as to the animals, other than carnivorous animals, which he desires to hunt.

14. *Power of Conservator to make rules as to number of animals to be killed, and to protect immature animals.*—The Conservator of Forests may, with the

concurrence of the Commissioner of the Division in which the forest is situated, make rules with regard to forests coming under Class II:—

- (a) fixing the maximum number of animals, other than carnivorous animals of any kind to be killed in any Reserved or Protected Forests, and by any permit-holder or party of permit-holders during any forest year (1st July to 30th June); and fixing the number of permits to be granted in a forest under this class in any year;
- (b) to prevent the killing or capture of immature animals, other than carnivorous animals;

and every permit-holder or officer coming under Rule 8 shall be bound by such rules.

15. *Appeals against refusal of permit.*—When an application for a permit in Forms A and B is refused, or where the officers having concurrent authority to issue such permits disagree, an appeal shall lie to the Commissioner of the Division.

16. *Permits to shoot dangerous animals.*—A permit in Form C may be issued free of charge by the Subdivisional or District Officer or by the Divisional Forest Officer authorising the holder to hunt, shoot or trap any specified carnivorous or other animals considered dangerous to life. The permit shall be

(a) non-transferable, and (b) available for the period specified therein, not exceeding three months.

17. *Production of permits on demand.*—Every person to whom a permit has been granted under these rules, and who is found hunting, shooting, trapping or fishing in any forest to which these rules apply, shall, on the demand of any Magistrate, Forest Officer or Police Officer, having jurisdiction in the locality, produce his permit.

18. *Cancellation of permits.*—(1) Any permit granted under these rules for shooting in a forest may be cancelled at any time by the Conservator of Forests, with the concurrence of the Commissioner of the Division in which the forest is situated, if circumstances render it advisable to stop shooting in that forest, a proportionate return of the fee paid by the permit-holder being made to him.

(2) If any person to whom a permit has been granted under these rules commits a breach of any provision of the Forest Law, or of any of these rules, the permit shall be cancelled in lieu of, or in addition to, any other punishment to which such person may be liable under the Indian Forest Act, 1878, or under any other law for the time being in force.

19. *Saving as to elephants.*—These rules shall be subject to the provisions of the Elephants' Preservation Act, 1879 (VI of 1879).

Form A.

PERMIT TO BE GRANTED UNDER RULE 4 OF THE RULES ISSUED UNDER NOTIFICATION
No. , DATED THE 1915.

[*Obverse.*]

License to hunt, shoot or fish within a Reserved or Protected Forest—Fee, Rs. 10.

Permit to hunt, shoot or fish within the _____ ^{Reserved}
Protected Forest of
the _____ Division between the date of the permit and
the 30th June 19 , granted under Rule 4 of the Rules issued under Notification
No. , dated the , subject to the conditions
specified on the reverse.

(a) To

(b) Of

(c) Status

The holder of this permit is permitted to hunt, shoot and fish in the forest mentioned in the license between the 1st February and the 30th June.

Signature of Officer granting the permit.

NOTE.—Other details may be added for the purpose of identification at the discretion of the Officer granting this permit.

day of 19 .

Signature of Officer granting the permit.

[Reverse.]

I.—This permit is non-transferable.

II.—The poisoning of rivers or other waters, the killing of fish by any explosive, the damming and baling of water, and the use of small nets to catch fish are prohibited.

III.—The following close seasons are prescribed :—

Rhinoceros, female buffalo and female bison and, in the Jalpaiguri District, male bison	..	..	..	..	Whole year.
Male bison in other districts	..	..	..	..	1st May to 31st August.
All stags with horns not in velvet and male antelopes				..	1st May to 31st October.
Hornless male deer or deer when with horns in velvet and females of all deer and antelopes	..	..	..	..	Whole year.
Hare	..	..	..	..	1st May to 30th September.
Green and imperial pigeon	..	..	..	..	1st February to 31st July.
Jungle fowl	..	..	..	..	} 15th March to 30th September.
Pheasants, male florican and partridges	..	..	..	..
Hen florican	..	..	..	..	Whole year.
Peafowl	..	..	..	..	1st March to 30th November.

killing or snaring of any of the above within the close season prescribed in each case is prohibited.

-No wild elephant shall be hunted, shot at, killed, injured or captured.

-The setting of traps or snares is prohibited.

-This permit does not authorise hunting, shooting or fishing in any Reserved or Protected Forest, or in any part of any Reserved or Protected Forest, which has been notified in the *Calcutta Gazette* as belonging to Class II or Class III of Rule 3 of Notification No. , dated , nor, unless it only applies to the Sundarbans Division, shall it be held to authorise hunting, shooting or fishing in any Reserved or Protected Forest between the 1st February and 1st July, unless the certificate showing that the holder has received special permission to hunt, shoot or fish between those dates has been countersigned by the officer granting the permit.

Breach of any of the conditions of this license will render the license liable to forfeiture, in addition to any punishment to which the holder thereof may be liable under the law.

-The employment of unlicensed armed beaters, except for the purpose of beating out tiger, leopard and bear, is prohibited.

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[Reverse.]

The maximum number of certain animals other than carnivorous animals, that may be shot under this license, is :—

KIND OF ANIMAL.	Maximum number to be shot.	Fee to be paid for each animal shot, in addition to the permit fee, under Rule 11.
		Rs.

Name of Forest Guard accompanying the party with rate of pay—

Name—

Pay—Rs. per mensem.

1. This permit is non-transferable.
2. The permit-holder shall observe the following close seasons :—

Rhinoceros, female buffalo and female bison
and, in the Jalpaiguri District, male
bison Whole year.

Male bison in other districts 1st May to 31st August.

All stags with horns not in velvet and male
antelopes 1st May to 31st October.

Hornless male deer or deer when with horns
in velvet and females of all deer and ante-
lopes Whole year.

Hare 1st May to 30th September.

Green and imperial pigeon 1st February to 31st July.

Jungle fowl	} 15th March to 30th September.
Pheasants, male florican and partridges	

Hen florican Whole year.

Peafowl 1st March to 30th November.

The killing or snaring of any of the above within the close season prescribed in each case is prohibited.

3. The permit-holder shall observe any orders issued under Rule 14 limiting the number of animals to be shot or prohibiting the killing of immature animals.

4. The employment of unlicensed armed beaters, except for the purpose of beating out tiger, leopard and bear, is prohibited.

5. The holder of a permit shall camp only on such regular camping-ground as may have been set apart by the Forest authorities, or in places specially pointed out to him by a Forest Officer.

6. This permit can be cancelled under Rule 18 of the Shooting Rules.

7. The holder of a permit is not exempted from liability under the Indian Forest Act, 1878, or any other law, or for anything done in contravention of such Act or law, or for any damage caused by him, his retainers or followers.

8. Every permit-holder must, if so ordered by the Forest Officers, pay for a Forest Guard to accompany him and his camp during the time he is within Government Forest limits, whose sole duty it will be to see that none of the Forest Rules are infringed by the permit-holder or his followers.

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Form C.

SHOOTING PERMIT.

[*Obverse.*]

Under Rule 16 of the Rules issued under Notification No.
, dated , 1915.

Name of permit-holder—

Residence—

Status—

Period for which valid—

Name of Forest or portion thereof for which the permit is granted, with boundaries thereof :

Description of carnivorous animal, or other animal dangerous to life, which the permit-holder is permitted to hunt, shoot or trap :

Signature of Issuing Officer.

Dated

19

[*Reverse.*]

1. This permit is non-transferable, available only for the period specified not exceeding three months, and only authorises the hunting, shooting, or trapping of the animal or animals described therein.

2. The holder of this permit shall camp only on such regular camping-grounds as may have been set apart by the Forest authorities, or in places specially pointed out to him by a Forest Officer.

3. The holder of this permit is not exempted from liability under the Indian Forest Act, 1878, or any other law, for anything done in contravention of such Act or law, or for any damage caused by him, his retainers or followers.

Notification No. 10479 For., dated the 10th November, 1914.—In exercise of the power conferred by Section 3 of the Wild Birds and Animals Protection Act, 1912 (VIII of 1912), and in supersession of the late Eastern Bengal and Assam Government's Notification No. 1361 P.L., dated the 28th April, 1911, issued under the provisions of the Indian Arms Rules, 1909, the Governor in Council is pleased to declare the periods indicated in Lists A and B annexed hereto to be close seasons for the birds and animals respectively mentioned in those lists throughout the whole of the Presidency of Bengal.

Notification No. 8338 For., dated the 25th August, 1914, published at page 1659, Part I of the *Calcutta Gazette* of the 2nd September, 1914, is hereby cancelled.

List A.

THE WHOLE YEAR.

Birds.			Animals.
Laughing thrushes	..	..	Female buffaloes.
Babblers	..	..	Rhinoceroses.
Whistling thrush	..	..	Female bison, and, in Jalpaiguri District,
Nuthatches	..	..	male bison.
Drongos	..	..	Female deer of all kinds.
Creepers	..	..	Female antelopes.
Wrens	..	..	Male deer when hornless or in velvet.
Warblers	..	..	Female serow and gooral.
Shrikes	..	..	Gazelles.
Minivets	..	..
Orioles	..	..
Grackles	..	..
Starlings	..	..
Mynas	..	..

List A—continued.

Birds.	Animals.
<p> Fly-catchers Muscicapidæ. Chats } Robins and red starts, thrushes .. } Turdidæ. Blackbirds and ouzels } Martins and swallows Hirundinidæ. Wagtails } Pipits } Motacillidæ. Larks (except Orlolans) Alaudidæ. Sunbirds Nectariniidæ. Pittas Pittidæ. Woodpeckers Picidæ. Bee-eaters Meropidæ. Hoopoes Upupidæ. Swifts Cypselidæ. Cuckoos Cuculidæ. Owls } } Strigidæ. } Asionidæ. </p>	
Hen-florican.	

List B.

PART OF THE YEAR.

Birds.			Animals.		
Ducks	{ Whistling Teal .. } { Cotton Teal .. }	1st May to 31st August.	Male bison	.. 1st May to 31st August.	
Male florican	.. ..	15th March to 30th September.	Male deer	.. 1st May to 31st October.	
Jungle fowl	.. ..	Ditto.	Male antelopes	.. Ditto.	
Partridges	.. ..	Ditto.	Hares	.. 1st May to 30th September.	
Pheasants	.. ..	Ditto.			
Peafowl	.. ..	1st March to 30th November.	Male serow and gooral	.. 1st April to 30th September.	
Pigeons	.. ..	1st February to 31st July.			
Ortolans	.. ..	1st April to 31st August.			

BHARATPUR.

The following are extracts from the Bharatpur Game Regulations:—

I. The close season in the State for all small game extends from March 15th to September 15th.

II. The following shall be the classification of game animals and birds :—(a) Big game shall consist of tiger, panther, pig, chikari, black buck and sambhar. (b) Small game shall consist of sand-grouse, partridge, quail, duck, teal, geese, snipe, harial, demoiselle-crane, foxes, hares, fish and other game birds or animals.

III. (a) The killing of peacocks, bangai (wild cattle), nilgai and monkeys is absolutely prohibited. (b) The poisoning or dynamiting of rivers, streams or tanks is prohibited. (c) No person shall be permitted to shoot, wound, kill, capture or otherwise destroy any animal or bird of game in any State Shikar Preserve unless with the special permission of the Darbar. (d) No person shall be permitted to shoot, wound, kill, capture or otherwise destroy any animal or bird of game in places other than the State Shikar Preserves, except under a license in accordance with the regulations.

IV. There shall be three kinds of licenses :—(a) Season License. (b) Temporary License. (c) Cultivator's License.

V. Season Licenses * * * will be granted at the discretion of the Darbar on payment of a fee of Rs. 10 and will entitle the holder to shoot,

kill or capture game according to the terms of the license during the open season anywhere within the State except in the State Preserves.

VI. Temporary Licenses * * * will be similarly granted and will entitle the holder to similar privileges, but the fee charged for a Temporary License will be Rs. 5 only and the period covered by it shall not exceed 15 days.

In the case of Season and Temporary licenses, particulars will be sent to the Game Preservation Officer only.

VII. Any one found killing or capturing any wild animal or bird or preparing or attempting to do so, shall be bound to produce his license when called upon to do so by any officer or employé of the Revenue, Police, Forest or Shikar Departments.

VIII. On non-production of the license or in case of refusal, the following procedure shall be adopted :—(a) If the offender is a European or an Indian gentleman his name and address shall be taken down and reported to the nearest Tahsil or Thana for immediate transmission to the Darbar. (b) If the offender is a person of respectable position, his name and address shall be taken down and reported to the nearest Thana and the Shikar Department shall then at once institute enquiries and take steps for his prosecution in the Magistrate's court, if necessary. (c) If the offender is a person of inferior position, he may be arrested and taken to the nearest Police Station.

IX. Whoever is convicted of shooting, killing, capturing, wounding or selling animals and birds in violation of these Regulations shall be liable to punishment

of simple imprisonment for a term not exceeding 6 months or fine not exceeding Rs. 500. In all cases of conviction, dogs, arms and shikar paraphernalia belonging to the person convicted shall be liable to confiscation.

The following are places notified as Preserves under the Bharatpur Game Regulation. All uncultivated land within the following areas :—

Ghana, Ikran Rundh and Chiksana to Khemra Jungle including the Jheel near Bharatpur; Bansi Rundh, 16 miles from Bharatpur; Mandhera and Rasia Rundh, near Dig, Helak and Sakitra, near Nadbai and Kumher; Thun Jungle, near Dig; Jhil Ka Bara, near Bayana; Bhandor Jungle, Sanwal Das Ki Garhi, Moti Jhil, Gopal and Nahroli Ka Nagla, near Bharatpur.

KARAULI STATE.

The following rules regarding game shooting and protection of birds are in force in the Karauli State :—

1. The shooting of tigers, panthers, bears, nilgais, or roz and sambhars or stags without special permission is strictly forbidden. The cases of breach of this rule are severely dealt with.

2. The killing of a peacock is an offence punishable under Section 27 of the local criminal code, while the owl, crane, parrot and *chakva* are considered as sacred birds.

3. Wild bears are, however, allowed to be shot by the public beyond Machilpur towards Bhojpur and in the Utgit Tehsil down the Ninhera valley.

4. The Rao of Haroti enjoys the private shooting within the State without obtaining permission from His Highness and not otherwise prohibited.

BHOPAL.

The following shooting rules relating to Bhopal State Forests, under Sections 26 (i) and 75 (d) of the Bhopal Forest Act, have been sanctioned by Her Highness the Ruler of Bhopal :—

1. The poisoning or dynamiting of rivers, streams or tanks is prohibited. The Conservator of Forests shall prepare in October of each year a list of forests which shall be closed to the public generally for hunting, shooting, netting or setting traps and snares. The list shall specify those forests which are closed, (a) absolutely for purposes of forest management or as sanctuaries for the protection

of game ; (b) conditionally, subject to the issue of a permit in accordance with the rules hereinafter following.

2. Permits under Rule 1 shall be of two kinds, i.e., District and Block permits and shall, subject to the control of the Chief Conservator, be issued by the Conservator. The former shall be valid for any forest in the district or division for which they are issued, subject to the conditions of Rule 1 and to the reservation in respect of occupied blocks. Block permits shall ordinarily be valid for one block only, but may cover two blocks when there are no applicants for the surplus blocks. Provided that wounded game may be pursued into an adjoining district or block.

3. Only a limited head of game shall be allowed to be killed in any shooting block in any one year. On this limit being reached, the block shall, subject to the exception in favour of block permit-holders permitted under Rule 4, be closed for the remainder of the season as a matter of course. It shall also be within the discretion of the Conservator to prohibit the driving of any animals. The Nazim and the Forest Divisional Officer, subject to the approval of the Conservator, shall fix the limit of game which may be allowed to be killed in each block under the above rule. They shall, at the same time, subject to similar approval, fix for each block the number of head of specified game to be shot by any one person under a permit. The number so fixed shall be on a sliding scale based on the duration

of the permit, according as it is for fifteen days, one month or over one month. The aggregate of game of each species allowed to be killed by any one person, whether holding a permit or not, during the season (1st November to the 31st October) in each Forest Division shall be similarly fixed. Provided that, except with special permission of the Conservator, the aggregate of game of the following species allowed to be killed by any one person in the forests of this State during the year from the 1st November to the 31st October, shall not exceed the following: Two tigers; four cheetals; four sambhars; two bears; four panthers; five milgais.

4. Exempted persons and holders of District permits shall be required, before shooting in any block, to make themselves acquainted with the number of head available for shooting, and this number may not be exceeded. Block permit-holders may exceed this limit so long as they do not shoot in excess of the number entered in their permits but any excess over the block limit caused by such permit-holders shooting up to the full number of game allowed by their permits will be considered by the Forest Divisional Officer when fixing the block limits for the succeeding year. Every permit shall specify the number of sportsmen who are authorized by it to shoot, and may limit the number of retainers and of dogs and other animals that may be taken into the forest. The permit shall have entered upon it the number and kind of game which may be killed. As soon as he leaves the shooting Block or District, the permit-holder shall return his permit to the Forest Divisional Officer, endorsing upon it the number and kind of game

killed, and the Forest Divisional Officer shall transmit the same to the Conservator. No application should be made for a Block permit more than three months, or less than one month before the date on which it is desired to make use of it : provided that, in the case of a resident of Bhopal town, a notice of fifteen days shall be considered sufficient and that permits for short periods, not exceeding ten days, may be granted on application.

5. No person shall hold more than one block at the same time ; provided that two sportsmen shooting together may take two blocks in the same district for the same period. The following certificate to be signed by the permit-holder shall be printed in red ink on a detachable slip added to the permit :—

“I certify that I have read the rules printed on the back of my shooting permit and that I will comply with the same ; also that I will not transfer my permit to any other person and that I will return it at the earliest possible moment should I find that I am unable to utilize it.” The certificate shall be returned to the Conservator when the permit-holder receives the permit. The duration of a permit shall be determined by the demand for shooting blocks. In no case shall it exceed three months. Permits are not transferable. Sportsmen shall not sit up for the purpose of shooting any animals over water or over salt-licks or over paths leading directly to water or to a salt-lick. The holder of the permit shall camp only on such regular camping grounds as may have been set apart by the Forest authorities

or in places specially pointed out to him by a Forest Officer. A permit may be cancelled at any time by the Conservator or the Chief Conservator. Any breach of the Bhopal Forest Act or of any rule made under the Act, if committed by the holder of the permit or any of his retainers or followers, shall render the permit liable to cancellation. Permits are liable to be declared invalid in regard to any particular forest in case of fire breaking out in any part of the forest or in case of unwarrantable interference with forest work. The holder of a permit is not exempted from liability under the Forest Act, or any other law, for anything done in contravention of such Act or law, or for any damage caused by him, his retainer or followers.

NOTE.—Section 26 of the Forest Act prescribes penalties for breach of these rules. And Section 67 of the Act empowers the Forest Divisional Officer to compound any such breach on payment of a sum of money.

6. Permit-holders may not enter any forest without previously giving 24 hours' notice to the local Forest official. Every permit-holder must pay for a Forest Guard to accompany him and his camp during the time he is within State forest limits, whose sole duty it will be to see that none of the Forest rules are infringed by the permit-holder or his followers. Provided that, in exceptional cases in which permit rights are exercised only at irregular intervals and for short periods, the Conservator of Forests or the Nazim of the district may exempt permit-holders from this payment. A permit issued under these rules does not authorize the

destruction of any kind of bird other than the game and edible birds included in the list appended. Provided that the shooting or snaring of any kind of bird may be permitted to *bona fide* naturalists for the purpose of scientific collection, in limited numbers, to be regulated by the Forest Divisional Officer.

List of Game and Edible Birds.

Sand-grouse (*bhat titar*), peafowl (*taos, mor*), jungle fowl (*jangli murgh*), partridge (*titar*), quail (*bater*), bustard (*charz*), florican (*chotta charz*), goose (*kaz*), kulang (*kulang*), duck (*bat*), pigeon (*kabutar*), dove (*fakhta*).

Close Season.

The close season for wild birds is as follows :—

Bustard—1st May to 30th November; ducks, comb duck, spotted bill, cotton teal, whistling teal—1st June to 30th November; florican—cocks, 15th May to 31st July; hens, 15th May to 30th September; jungle fowl—1st March to 30th November; partridges, grey—1st April to 30th September; black painted—1st April to 30th September; peafowl—1st May to 30th November; quail—1st June to 30th September; sand-grouse—1st April to 30th September.

BEHAR AND ORISSA.

The following rules are in force, to regulate hunting, shooting, fishing, the poisoning of water and the setting of traps or snares within the Reserved Forest, in Bihar and Orissa : -

I. No person shall, within the Reserved Forests in Behar and Orissa—(a) poison any river or other water ; (b) kill fish by any explosive ; (c) dam and bale water ; or (d) use small nets to catch fish.

II. The following close seasons shall be observed within the said forests :—
For rhinoceros, buffaloes and female bison—the whole year. All stags with horns not in velvet and male antelopes—1st May to 31st October. Hornless male deer or deer when with horns in velvet, and females of all deer and antelopes—the whole year. Green and imperial pigeon—1st April to 15th June. Jungle fowl—1st April to 31st October. Pheasants, florican, partridge and peafowl—1st April to 30th September. Hare—1st May to 30th September.

The killing or snaring of any of the above within the close season prescribed in each case is prohibited.

III. For the purposes of these rules forests shall be divided into three classes, namely :—

Class I.—Forests in which hunting, shooting, trapping or fishing is permissible only under a permit in Form A.

Class II.—Forests in which hunting, shooting, trapping is permissible only under a permit in Form B.

Class III.—Forests in which all hunting, shooting, trapping or fishing is prohibited, in order to prevent the extinction of any species or to form a sanctuary for game, or for any other reason.

All Reserved Forests shall be considered as belonging to Class I unless the contrary is specially notified by the Local Government in the *Behar and Orissa Gazette* at the instance of the Commissioner of the Division or the Conservator of Forests through the Commissioner of the Division.

NOTE 1.—The following forests have been notified under this rule by Notification No. 408-T. R., dated the 2nd May, 1907 :—

Forest Division.	Range of Group.	Name of Forest or Block.	Class.
Singhbhum ..	Samta Range ..	The Samta, Tholakabad, Tirilposi, Karam-poda and Kodolabad Blocks.	II.
Ditto ..	Koima ditto ..	The Ankua Block	
Ditto ..	Kolhan ditto ..	The Chatkori ditto	

Forest Division.	Range of Group.	Name of Forest or Block.	Class.
Sambalpur ..	Barapahar Range ..	The Debarigarh Block No. 3	II.
Ditto ..	Sambalpur Range ..	The Hathibari	
		Kulchar Block, viz.—	
		Bandher Block No. 28	
		Hathibari Dungri Block No. 28A	
		Brahmini Dungri Block No. 28B	
		Chamunda Block No. 28C	
		Kusamura Block No. 28D	
		Kulchar Block No. 28E	
		Meghpal Block No. 28F	
Palamau	Saidope, Ramanday, Kumandi (including Chatum) and Barasand	II.
Puri ..	Southern Range ..	Arrang, Bankar, Tamna, Rajin and Katwal	II.
Ditto ..	Ditto ..	Baratpur, Jaimangal, Majana	

NOTE 2.—The following forests have been notified under this rule by Notification No. 1192-T. R., dated 8th June, 1907 :—

Angul ..	Bagmunda Range ..	Bagmunda, East	II.
		Ditto, West	
Ditto ..	Raigoda Range ..	Raigoda	

IV. In the case of reserves falling under Class I, the necessary permit may be granted by the District Officer or by the Divisional Forest Officer in Form A, on payment of a fee of Rs. 10, for the period between the date on which the permit is granted and the 30th June following the date of its issue, and shall be non-transferable. But no permit in Form A shall be held to authorize hunting, shooting, trapping or fishing in any reserved forest between the 1st February and the 1st July without the express permission of the authority granting the permit. Whenever such permission is given the fact shall be endorsed on the permit.

V. In the case of Reserves falling under Class II the requisite permit in Form B, on payment of the requisite fee, may be granted by the Conservator of Forests, the District Officer, or Divisional Forest Officer. Such permits shall not ordinarily be granted in Reserved forests, except to approved sportsmen and shikaris, for the exclusive purpose of hunting and killing carnivorous animals and such other animals as may be expressly mentioned in the permit. These permits shall be (a) non-transferable, (b) available for the period specified therein not exceeding two months, and (c) may apply to a portion or the whole of any one Reserve provided that wounded game may be followed into another portion of a Reserve than that to which the permit applies.

VI. The holder of a permit in Form A, to hunt, shoot, trap or fish in forests of Class I of any Forest Division, may be allowed by the Conservator of Forests

to shoot carnivorous animals, barking deer, hare or winged game or to fish in any or all of the forests of Class II included in the same division, during the currency of his permit in Form A without extra charge.

VII. No permit shall be required for fishing in tidal waters.

VIII. Fees shall be charged for special permits issued under Rule V according to the following scale:—To non-residents of Behar and Orissa, Rs. 50; residents of Behar and Orissa outside, in which the forests are situated, Rs. 30; residents of the district, Rs. 20. Provided that every holder of a special permit shall also pay for a Forest Guard to accompany him and his camp during the time he is within any Reserved Forest specified in his permit, if the Divisional Forest Officer appoints a Forest Guard to accompany him. In addition to the permit fee, where a permit fee is required, there shall be a charge of Rs. 10 for the first bison killed, and a charge of Rs. 20 for each subsequent one killed under the same permit. No person who applied for a permit, whether under Form A or Form B, shall employ any one to search for game in a Reserved Forest prior to the date of his permit. At the time a permit in Form B is taken out, a declaration shall be made by the permit-holder as to the animals, other than carnivorous, which he desires to hunt.

IX. When an application for a permit in Forms A and B is refused, or where the officers having concurrent authority to issue such permits disagree, an appeal shall lie to the Commissioner of the Division.

X. A permit in Form C may be issued free of charge by the Subdivisional or District Officer or by the Divisional Forest Officer authorizing the holder to hunt, shoot or trap any specified carnivorous or other animal considered dangerous to life. The permit shall be (a) non-transferable, and (b) available for the period specified thereon, not exceeding three months.

Every person to whom a permit has been granted under these rules, and who is found hunting, shooting, trapping or fishing in any forests to which these rules apply, shall, on the demand of any Magistrate, Forest Officer, or Police Officer, having jurisdiction in the locality, produce his permit.

If any person to whom a permit has been granted under these rules commits a breach of any provision of the Forest Law or of any of these rules, the permit shall be cancelled in lieu of or in addition to any other punishment to which such person may be liable under the Indian Forest Act, 1878, or under any other law for the time being in force.

XI. These rules shall be subject to the provisions saving as to elephants of the Elephant Preservation Act, 1879 (VI of 1879).

The holder of this permit is permitted to hunt, shoot and fish in the forest mentioned in the license between the 1st February and the 30th June.

Signature of Officer granting the permit.

Birds.

Hérons, egrets, rollers, kingfishers, hoopoes, Indian orioles and black-headed orioles—the whole year. Ducks, florican, jungle fowl, partridges, peafowl, pigeons, sand-grouse, painted snipe, and spur-fowl—15th April to 30th September.

Animals.

The females of buffaloes, bison, deer, gazelles and antelopes (except nilgai in the trans-Gangetic District) and male deer when hornless or with horns in velvet—the whole year.

Hares, the females of nilgai, males of deer, gazelles and antelopes (except nilgai in the trans-Gangetic Districts)—1st May to 31st October.

The close times declared above shall not be held to apply in the case of tribal hunts of aboriginal races.

BOMBAY.

The following rules have been prescribed to regulate hunting and shooting in the Reserved and Protected Forests of the Bombay Presidency excluding Sind and the Kanara, Belgaum and Dharwar Forest Divisions :—

1. The following acts are prohibited in all Reserved and Protected Forests—
 (a) the poisoning of rivers or other water, the explosion of dynamite or other explosive therein, the setting of cruives or basket traps for the purpose of killing or catching fish. (b) the setting of spring guns, snares or traps; (c) the taking, wounding or killing of (i) game other than *carnivora*, bear or pig over water, salt-licks, or paths leading directly to water or salt-licks; (ii) any bird or animal for which a close-time has been prescribed under Act VIII of 1912 during the close-time so prescribed; (iii) such animals as may from time to time be notified in this behalf by the Conservator of Forests: Provided that any of the above acts may be done with the written permission of the Conservator of Forests, or, in the case of snares or traps, of the Divisional Forest Officer.

NOTE.—For the purpose of this rule the word *carnivora* includes tiger, panther, wolf, hyena and wild dog.

2. (a) In any Reserved or Protected Forests or portions of Reserved or Protected Forests to which the Local Government may, for the purpose of strict conservation or for the preservation of animals which are becoming rare, or for both of these purposes, apply this and the following rules by a Notification published in the *Bombay Government Gazette*, hunting and shooting are prohibited except under a license to be obtained from the Conservator of Forests. (b) Every license issued under clause (a) of this rule shall permit the holder only to hunt and shoot,

and shall be valid for a period of one year from the date of its grant in any Reserved or Protected Forest in the Presidency to which these rules are made applicable under clause (a), subject to the condition that before it has effect in any Forest Division in which the licensee does not reside or exercise any jurisdiction, it must be countersigned by the Divisional Forest Officer. (c) No such license shall entitle the holder to hunt or shoot more than two stags or bulls of each species of animal to be specified in the license, according to a list to be prepared for each Forest Division by the Conservator of Forests. Licenses shall not be refused except for special reasons to be stated in writing. Wounded game may be pursued into the forests of the division adjoining that for which the license is valid or into a closed forest. A license granted under these rules shall not be transferable. Every person to whom a license has been granted under these rules, and who is found hunting, shooting, snaring or trapping in any forest to which these rules apply, shall, on demand by any Forest, Police or Revenue Officer produce his license.

3. If any person to whom permission or a license has been granted commits a breach of any provision of the Indian Forest Act, 1878 (VII of 1878), as amended by the Forest Act, 1890 (V of 1890), or of any rules made thereunder, he shall be liable to the penalty of having the permission or license, as the case may be, cancelled by the Divisional Forest Officer, in addition to any other penalty to which he may be liable under the Indian Forest Act, 1878 (VII of 1878), or otherwise. An appeal against the cancellation of the permission or the license by the Divisional

Forest Officer shall lie to the Collector, whose decision shall be final. In any case where the Divisional Forest Officer or Conservator thinks it advisable, he may direct that a Forest Guard or other person shall accompany the camp of any licenseholder hunting or shooting in forests, with the object of seeing that Forest Rules are not infringed by camp followers. The word "hunting" as used in these rules, includes tracking for the purpose of discovering the lie of wild animals, provided that any person holding a license is not prohibited from employing any number of trackers. Nothing in these rules shall be taken to exempt any person from liability in respect of any offence by injury to the forest or its produce or of any other offence punishable under the Indian Forest Act, 1878 (VII of 1878), as amended by the Forest Act, 1890 (V of 1890).

Rules for Kanara, Belgaum and Dharwar.

Rules to regulate hunting and shooting in the Reserved and Protected Forests of the Kanara, Belgaum and Dharwar Forest Divisions, include the following:—

1. Hunting and shooting are prohibited except under a license to be obtained from the Collector or Divisional Forest Officer. The forests in each division shall be divided into shooting blocks of convenient size by the Divisional Forest Officer subject to the approval of the Conservator of Forests. The Conservator of Forest shall determine every year which of the blocks in each of the divisions of his circle,

the forest of which have been so divided into blocks shall be absolutely closed to the public generally for hunting and shooting, whether for purposes of forest management or for the protection of game. In October of each year he shall publish, according to forest divisions, a list of the blocks so closed, in the *Bombay Government Gazette*, and copies of the list so published shall be posted up for information in the office of the Conservator of Forests, and in the offices of the Conservator of Forests, and in the offices of the Collector and Divisional Forest Officers of each forest division to which these rules apply.

2. Licenses granted shall be of two kinds, viz., District and Block licenses. District licenses shall be issued by the Collector of the District and countersigned by the Conservator of Forests; block licenses shall be issued by the Divisional Forest Officer, subject to the control of the Conservator. District licenses shall be valid for any forest of the district for which they have been issued subject to the conditions of Rule 1, and to the reservation in respect of occupied blocks. Block licenses shall ordinarily be valid for only one block, but may cover two blocks if there are surplus blocks open for shooting for which no applications have been made: Provided that wounded game may be pursued into an adjoining block or district. The holder of a district license may hunt and shoot in any forest which has not been notified as closed provided that hunting and shooting by the holder of a district license in any block for which a block license has been issued shall be permitted only when the holder of such block license is not present in the area

covered by the license, and if the holder of the block license arrives in the block specified in the license, the holder of the district license shall at once stop all hunting and shooting in such block ; if any holder of a district license wishes to reserve entirely any block for his own sport, he must take a block license for such block.

3. With the exception of *carnivora*, bear and pig, only a limited number of game shall be allowed to be killed in any shooting block in any one year. When this limit is reached, the block shall, subject to the exception permitted by Rule 4, be closed to shooting for the remainder of the season. The Conservator of Forests shall have full discretion to prohibit driving or beating the forests with men or dogs in any specified block for any animals other than *carnivora*, bear and pig and to prohibit the employment for tracking, stalking, tying up for *carnivora*, or conducting drives or beats, of any persons other than those to whom permits to act as shikaris have been given by the Divisional Forest Officer, subject to the Conservator's approval. (a) The Divisional Forest Officer, subject to the approval of the Conservator of Forests, shall before October in each year fix the limit of game of each species which may be allowed to be killed in each block during the year (January—December) under the last preceding rule. (b) The Conservator of Forests shall similarly, before October in each year, determine the number of game of each species which may be killed by any individual during the year (January—December) in any of the forests of the circle : Provided that the limit of game allowed to be killed may be exceeded with the written permission of the Conservator in particular

instances, who may give such permission after consulting the Collector. When any holder of a district license kills any animal of any species, of which the number allowed to be killed has been limited, he shall report to the Divisional Forest Officer the species, sex and horn measurements of such animal and the shooting block in which it was killed. In each Divisional and Range Forest office, game books shall be kept in the form shown in the appendix, showing the number of protected animals allowed to be killed and the number of game of every kind killed up to date. Every holder of a district license must, before shooting in any block, make himself acquainted with the number of game of each species available for shooting—and may not in any case exceed this number.

4. A holder of a block license may exceed the limit fixed for the block covered by his license—provided he does not kill more than the number permitted by his license to be killed by him of any kind of protected animal. Any excess over the limit fixed for the block that may be caused by any holder of a block license killing up to the full number of game permitted to be killed by his license shall be considered by the Divisional Forest Officer in determining the number of game that may be allowed to be killed in such block during the succeeding year. Every application for a license shall state the number of sportsmen intending to hunt or shoot together and every license shall specify the number authorized by it to hunt and shoot. Provided that for the purpose of a block license a party shall be limited to two guns. The Conservator of Forests shall have discretion to limit the number

of retainers and the number of dogs that may be taken into the forest. Every license shall have entered on it the number and kinds of game which may be killed. As soon as he leaves the district or shooting block, as the case may be, every licenseholder shall return his license to the Divisional Forest Officer, endorsing on it the number and kind and the horn dimension in the case of protected animals, or length in the case of *carnivora* and bear—of all game killed by him. No application for a block license may be made more than three months or less than one month before the date from which the applicant desires to avail himself of it, provided (a) that fifteen days' notice shall be sufficient in the case of a resident of the district for which a license is applied for, and (b) that a license for a short period not exceeding ten days may be granted as soon as it is applied for. The duration of a license shall be determined by the demand for shooting blocks, but shall not ordinarily exceed three months. Provided that a gazetted officer may be granted a license which shall be valid only when such officer is travelling on duty within the limits of his charge, to cover the whole year (January to December). No license is transferable.

5. The Collector and subject to appeal to the Conservator, the Divisional Forest Officer, shall have discretion to refuse a shooting license for good and sufficient reasons, and the Divisional Forest Officer may at any time cancel any block license and subject to the Collector's approval any district license for any breach of the Forest Act, or of any rule under the Forest Act. Any breach either of the Act

or of any rule under it shall render a license liable to cancellation, whether committed by the license-holder or by any of his retainers or followers and, in the event of fire breaking out in any forest block for which a license has been granted, or of unwarranted interference with forest work or with forest officials engaged in the exercise of their duty, licenses shall be liable to be declared invalid in respect of such forest block. The provisions of the last preceding rule do not exempt a license-holder from liability under the Forest Act or any other law for anything done in contravention of such Act or law, whether by himself or by any of his retainers or followers. The Divisional Forest Officer subject to the approval of the Conservator, may require any holder of a license to take a Forest Guard to accompany him and his camp during the time he is camped within forest limits. Every holder of a license, hunting or shooting in any forest to which these rules apply shall on demand by any Forest, Police or Revenue Officer produce his license for inspection. If any animal is wounded or killed by any license-holder in contravention of the provisions of Rule 1, such animal shall be counted in the aggregate number of animals of the same species permitted to be killed by the license-holder provided that such license-holder is not exempted by this rule from liabilities.

6. It shall be in the discretion of the Conservator or Divisional Forest Officer subject to the Conservator's approval to prohibit from time to time fishing and netting in any specified lengths of any rivers, except on issue of a license in the case of individuals, or of a general sanction to the residents of any village or villages,

to fish and net in the portion so specified, and the Conservator may also from time to time regulate by notification in each forest division concerned the size of mesh that may be employed in netting rivers (for the capture of fish).

Rules for the Province of Sind.

Rules to regulate hunting and shooting in the Reserved and Protected Forests of the Province of Sind include the following :—

1. (a) In any reserved or protected forests or portions of reserved or protected forests to which the local Government may, for the purpose of strict conservation or for the preservation of animals which are becoming rare, or for both of these purposes, apply this and the following rules by a notification published in the *Bombay Government Gazette*, hunting and shooting are prohibited except under a license to be obtained from the Deputy Conservator of Forests. (b) Every license issued under clause (a) of this rule shall permit the holder only to hunt and shoot, and shall be valid for a period of one year from the date of its grant in any reserve or protected forests in the Province of Sind to which these rules are made applicable under clause (a), subject to the condition that before it has effect in any Forest Division in which the licensee does not reside or exercise any jurisdiction, it must be countersigned by the Divisional Forest Officer. (c) No such license shall entitle the holder to hunt or shoot more than two males of each species of

animal to be specified in the license, according to a list to be prepared for each Forest Division by the Deputy Conservator of Forests. Licenses shall not be refused except for special reasons to be stated in writing. Wounded game may be pursued into the forest of the division adjoining that for which the license is valid or into a closed forest. A license granted under these rules shall not be transferable. Every person to whom a license has been granted under these rules, and who is found hunting, shooting, snaring or trapping in any forest to which these rules apply, shall, on demand by any Forest, Police or Revenue Officer, produce his license.

2. If any person to whom permission or a license has been granted commits a breach of any provision of the Indian Forest Act, 1878 (VII of 1878), as amended by the Forest Act, 1890 (V of 1890), or of any rules made thereunder, he shall be liable to the penalty of having the permission or license, as the case may be, cancelled by the Divisional Forest Officer, in addition to any other penalty to which he may be liable under the Indian Forest Act, 1878 (VII of 1878), or otherwise. An appeal against the cancellation of the permission or the license by the Divisional Forest Officer shall lie to the Collector, whose decision shall be final. In any case where the Divisional Forest Officer or Deputy Conservator thinks it advisable, he may direct that a Forest Guard or other person shall accompany the camp of any license-holder hunting or shooting in forests, with the object of seeing that Forest rules are not infringed by camp followers. The word "hunting," as used in these

rules, includes tracking for the purpose of discovering the lie of wild animals, provided that any person holding a license is not prohibited from employing any number of trackers. Nothing in these rules shall be taken to exempt any person from liability in respect of any offence by injury to the forest or its produce or of any other offence punishable under the Indian Forest Act, 1878 (VII of 1878), as amended by the Forest Act, 1890 (V of 1890).

The fees for licenses issued under the game rules are as follows :—

License under the rules in Article 121 for the Presidency proper excluding Kanara, Belgaum and Dharwar Divisions, Rs. 25.

Licenses under the rules in Article 123 for Kanara, Belgaum and Dharwar Divisions :—

District license to cover the whole year, Rs. 25 ; Block license for 3 months or more, Rs. 25 ; Block license for 2 months, Rs. 20 ; Block license for 1 month or less, Rs. 10.

Rewards on the following scale are allowed for the destruction of wild animals :—

Tigers—Full-grown, Rs. 24 ; half-grown, Rs. 12 ; cubs, Rs. 6.

Cheetas, leopards, panthers, and (in Kanara and Khandesh) bears—Full-grown, Rs. 12 ; half-grown, Rs. 6 ; cubs, Rs. 3. Wild red dogs (in East and West Khandesh)

—Rs. 5. Full-grown wolves (in Khandesh, Poona, Ahmedabad and Ahmednagar)—
Rs. 4. Full-grown wolves (in Sind)—Rs. 4.

District Magistrates are authorized to sanction special rewards, not exceeding Rs. 200, for killing specially proved and well recognized cases of man-eaters, tigers, panthers or leopards.

District officers should warn sportsmen, whether Europeans or others, (1) against trespassing on standing crops without the consent of the owners, (2) against shooting peafowl, or other birds or animals which are looked upon as sacred, in the vicinity of villages or habitations, (3) against shooting domestic animals, such as dogs or pigs, and (4) generally against shooting in the immediate vicinity of villages, temples and mosques.

BUNDI AND SHAHPURA.

There are no written game rules in force in the Bundi State, or in the Shahpura Chiefship (Haraoti and Tonk Agency), but nobody is permitted to shoot in these territories without the permission respectively of His Highness the Maharao Raja of Bundi and Rajadhiraja of Shahpura.

BURMA.

Notification No. 147, dated the 20th September, 1917.—In exercise of the powers conferred by Sections 26 (*h*), 33 (2) (*e*) and (3) and 77 (1), (2) (*d*) and (3) of the Burma Forest Act, 1902, the Local Government is pleased to make the following rules to regulate or prohibit hunting and shooting and the setting of traps or snares in or on the reserved forests and the public forest land of Burma, in supersession of the undernoted rules published in this department Notification No. 198 of the 31st October, 1911, namely :—

(a) So much of Rules 2 to 7, both inclusive, as relates to hunting, shooting and setting traps or snares ;

(b) Rules 14, 15 and 16 ;

(c) So much of Rule 98 as prescribes penalties for breach of Rules 14 and 15.

These Rules will come into force on the 1st November, 1917.

Rules.

1. (1) These rules may be called the *Burma Game Rules, 1917*.

(2) They extend to the whole of Burma, provided that they shall not apply to Shans in the Shan States other than Momeik.

2. In these rules—

(1) “*Deputy Commissioner*” includes the Superintendent of the Northern Shan States, the Superintendent of the Chin Hills and the Superintendent and Political Officer of the Southern Shan States;

(2) “*Game*” means any wild bird and any wild animal except an elephant;

(3) “*Game License Year*” means the 12 months commencing on the first day of November;

(4) “*Game Preserve*” means any area which has been declared by the Local Government to be a game preserve;

(5) “*Hunting*” includes shooting, trapping and snaring by any means whatsoever;

(6) “*Protected Game*” means Buffalo, Bison (*Bos Gaurus*), Mythun (*Bos Frontalis*), Saing (*Bos Sondaicus*), Serow, Goral and any other game in respect of which the Local Government may from time to time declare that it shall not be hunted without a license;

(7) “*Unprotected Game*” means game other than protected game.

3. No person shall—

- (a) shoot game with poisoned arrows ;
- (b) lay down poison for game ;
- (c) net wild water-birds ;
- (d) hunt within 100 yards of the compound of a Buddhist monastery.

On the expiry of a game license the officer issuing such license shall, if all the conditions prescribed therein have been satisfied either—

- (a) refund one-half of the fee paid thereon by the holder, or
- (b) if the holder so desires, renew the expiring license or issue a game-license in another form on payment of the difference between the fee prescribed therefor and half the fee paid on the expiring license by the holder.

“3A. No person shall hunt game of any specified kind the pursuit of which may have been prohibited by the Divisional Forest Officer by a public notice issued with the previous approval of the Deputy Commissioner. Such public notice shall define the area to which the prohibition extends and shall also specify the period during which the prohibition is to be in force. Such prohibition shall not be in

force for more than a period of three years at a time but shall be renewable on the expiry of any such period."

4. Nothing in the following rules shall be deemed to apply—

- (a) to the killing or wounding of game by any person in defence of himself or of any other person ;
- (b) to the shooting, trapping or snaring game in *bona fide* defence of property ;
or
- (c) to the destruction of any kind of game in any part of his division by the Divisional Forest Officer, or any other suitable person authorized by him, to the extent considered desirable by the Divisional Forest Officer with the previous approval of the Deputy Commissioner.

NOTE.—Clauses (a) and (b) of this rule authorize the pursuit into and killing in a forest reserve or game preserve of *carnivora* which have been preying on domestic animals and of bears which have been destroying crops in the vicinity of such forest reserve or game preserve.

Clause (c) of this rule is intended to authorize the Divisional Forest Officer to thin out any species of game, e.g., *cow-saing*, which may become overstocked in any area.

NOTE.—This rule authorizes the pursuit into and killing in a forest reserve or game preserve of *carnivora*, which have been preying on domestic animals and of bears, which have been destroying crops in the vicinity of such forest reserve or game preserve.

Schedule.

The following table shows in column 2 the close-time prescribed for the birds and other animals specified in column 1 :—

(1)	(2)	(1)	(2)
BIRDS.		ANIMALS.	
(a) (<i>Game birds</i>) All species of—		Females of bison ..	} The whole year.
Peafowl ..	} 1st March to 31st August.	Females of buffalo ..	
Pheasant, (except Argus Pheasant) ..		Males and females of rhinoceros ..	
Partridge ..		Females of sambhar ..	
Jungle fowl ..		Females of <i>swing</i> ..	
Woodcock ..		Females of <i>thamin</i> ..	
Painted snipe ..	1st April to 30th September.	Females of hog deer ..	
Duck ..	} 1st June to 15th October.	Females of serow ..	
Toal ..		Females of goral ..	
Quail ..	1st July to 30th September.	Females of <i>mythun</i> ..	
		Male deer, if hornless or in velvet.	} 15th June to 30th November.
		Males of <i>thamin</i> ..	

Schedule—*contd.*

(1)	(2)	(1)	(2)
BIRDS— <i>contd.</i>		ANIMALS— <i>contd.</i>	
Plover ..	1st July to 31st August. The whole year.	Males of hog deer ..	15th June to 15th October.
Lapwing ..		Males of sambhar ..	
Argus Pheasant		Males and females of <i>gyi</i> ..	
(b) (Other birds) All species of—		* Immature males of bison ..	The whole year.
Jay ..		* Immature males of <i>saing</i> ..	
Bluebird ..	The whole year.	* An immature male bison is defined as a bison, each horn of which is less than 22 inches in length, measured round the outside curve.	
Minivet ..		An immature male <i>saing</i> is defined as a <i>saing</i> , each horn of which is less than 20 inches in length, measured round the outside curve :	
Oriole ..			
Sunbird ..			
Flower-pecker			
Pitta ..			
Broadbill ..			
Woodpecker ..			
Barber ..			
Roller ..			
		Provided that a male bison or <i>saing</i> which has clearly defined transverse corrugations extending for 4 inches or more from the base	

Schedule—concl'd.

(1)	(2)	(1)	(2)
BIRDS—concl'd.		ANIMALS—concl'd.	
Bee-eater ..	The whole year.	of either horn shall not be considered to be immature, whatever the length of its horns may be.	
Tern ..			
Kingfisher ..			
Heron ..			
Egret ..			
Bittern ..			
Nightjar ..			
Owl ..			
Cranio ..			
Stork ..			
Hornbill ..			
Hoopoe ..			
Black Drongo or King Crow.			

5. The Local Government may—

- (a) declare any forest reserve or area of public forest land to be a game preserve and prescribe the additional restrictions which shall apply to hunting in that area ;

(b) declare in respect of the whole or of any part of Burma the kinds of game which may not be hunted without a license.

6. The Commissioner of the Division may prohibit the netting of any specified kind or kinds of game in any specified area.

7. Subject to the provisions of Rule 3 and of any notification issued under the Wild Birds and Animals Protection Act, 1912, any person may without a game license hunt unprotected game on public forest land.

8. No person may hunt without a game license—

(a) protected game wheresoever found ;

(b) any game whatsoever in a forest reserve or game preserve.

9. (1) Application for a game license shall be made in writing to the Divisional Forest Officer in charge of the area in which the applicant desires to hunt. The application shall contain the following particulars and shall conclude with a statement that the applicant has read these rules and an undertaking that he will observe their provisions:—

(i) full name, occupation and address in Burma of the applicant ;

(ii) kind of game license required according to the description in Rule 10 (1) ;

- (iii) method of hunting for which permission is asked ;
- (iv) dates between which he desires that the game license shall valid ; and
- (v) names of game preserves, if any, in which he desires to hunt.

The application shall be accompanied with the fee, if any, prescribed Rule 10 (2) for the kind of game license desired.

(2) The Divisional Forest Officer may either grant the game license asked or may decline to grant it, recording his reasons for refusal in writing.

(3) An appeal from a refusal of a Divisional Forest Officer to issue a game license shall lie to the Deputy Commissioner of the district in which the headquarters of the Divisional Forest Officer are situated. The Deputy Commissioner's order shall in all cases be final.

10. (1) A game license may authorize the holder to do any or all of the following acts subject to the provisions of these rules and of any notification issued by the Local Government under Section 3 of the Wild Birds and Animals Protection Act, 1912 :—

- A*—to hunt protected game in public forest land ;
- B*—to hunt any game in forest reserves other than game preserves ; and

C—to hunt in specified game preserves the kinds of game specified in the game license subject to the special restrictions prescribed for each game preserve.

(2) The fees chargeable for game licenses shall be as follows:—

	Residents of Burma.	Non-residents of Burma.
	Rs.	Rs.
(i) For a license to do <i>A</i> only	5	50
(ii) For a license to do <i>B</i> with or without <i>A</i> ..	20	150
(iii) For a license to do <i>C</i> with or without <i>A</i> and/or <i>B</i> ..	50	300

Provided that—

- (a) the fee for a game license to do *B* with or without *A* shall be reduced to Rs. 2 when the method of hunting which it is proposed to employ is by setting traps or snares only ;
- (b) the fee for a game license to do *C* only shall be reduced by the amount of the fee, if any, already paid during the same game license year by the licensee for a still valid game license to do *A* or to do *B* with or

without *A* and the fee for a game license to do *B* only by the amount of the fee, if any, previously paid by the licensee for a still valid game license to do *A* only ;

(c) the fee shall be reduced to one rupee in respect of any similar game license taken out for each Forest Division after the first.

(3) Except in the case of a game license falling under proviso (a) to Sub-rule (2), the officer who issued the license shall refund one-half of the fee, if any, paid by the holder on return of the license after its expiry, provided that all conditions prescribed thereby have been duly observed.

11. The officer who issues the game license shall cause the following particulars to be entered therein :—

- | | | | |
|--|----|---------|--|
| (a) The kinds and numbers of each kind of protected game which the licensee- | | | holder is allowed to hunt, subject, in the case of the animals named in the margin, to the maxima herein laid down ; |
| Buffalo | .. | 1 male | |
| Bison | .. | 2 males | |
| Mythun | .. | 1 male | |
| Saing | .. | 2 males | |
| Serow | .. | 2 " | (b) the methods of hunting permitted ; |
| Goral | .. | 2 " | (c) the fee paid for the license ; |
| | | | (d) the period for which the license is valid ; and |

(e) in the case of licenses to do *C* with or without *A* and/or *B*, the game preserves in which the license-holder may shoot.

12. A game license issued under Rule 9 shall be valid throughout the Forest Division within which it is issued.

13. Game licenses when issued to residents in the Forest Division or to Government servants whose duty, or to non-officials whose business, necessitates frequent visits to the Forest Division shall be valid till the 31st October following the date of issue ; in all other cases, game licenses shall be valid for a term not exceeding three months.

14. A license under these rules shall be issued in the form appended, and no licensee shall hunt except under and in accordance with the terms and conditions prescribed in such license.

Provided that in the case of residents of Burma, the Chief Conservator of Forests may issue a license valid throughout the Province on payment of treble the fees specified in Rule 10 (2) ; and a Conservator of Forests in charge of a territorial circle may similarly issue a license valid throughout his circle on payment of double the fees specified in Rule 10 (2). The license shall be in such form and subject to such conditions as the Chief Conservator or the Conservator, as the case may be, may think fit.

GOVERNMENT OF BURMA.

Game License.

Issued under Rule 9 of the Burma Game Rules, 1917.

License is hereby granted, within the Forest Division subject to the following conditions and to the provisions of any notification issued under Section 3 of the Wild Birds and Animals Protection Act, 1912, to

Full name—

Occupation—

Address—

in consideration of the payment of Rs. , the receipt of which is hereby acknowledged—

A —To hunt the kinds of protected game noted in the margin and to kill or wound of each kind not more than the number shown therein against that kind on all public forest-land in the said Forest Division.

B.—To hunt unprotected game and the kinds of protected game noted in the margin and to kill or wound of each of such kinds not more than

the number shown therein against that kind in all forest reserves other than game preserves in the said Forest Division.

C.—To hunt the kinds of game noted in the margin and to kill or wound of each kind of protected game not more than the number shown therein against that kind in the following game preserves in the said Forest Division :—

subject to the special restrictions prescribed for these preserves (copy attached).

NOTE.—The officer issuing the license should write the word “*Cancelled*” over his dated signature across either *B* and *C* or *C* only if the license is to do *A* only or *A* and *B* only.

Conditions.

(i) The game to hunt which this license is granted may be hunted by *

* Here enter methods of only.
hunting permitted.

(ii) The license-holder shall carry his license with him when engaged in hunting and shall produce it on the demand of any Revenue, Forest or Police Officer.

(iii) The license-holder may follow up wounded game beyond the limits of the area to which this license relates.

(iv) The license-holder shall keep an account, on the reverse of this license, of all head of protected game other than birds killed or wounded by him, showing the sex of each and the date upon and the place at which it was killed or wounded. He shall produce this account on being required to do so by any Revenue, Forest or Police Officer.

(v) This license is non-transferable.

(vi) This license is valid from the _____ to the _____ and the license-holder shall return it to the officer who issued it within 30 days from the date of its expiry.

(vii) The license-holder shall be bound to report to the Divisional Forest Officer all breaches of the conditions of this license committed by himself and all breaches of the Burma Game Rules, 1917, committed by others which come to his notice.

A breach by the licence-holder or by any of his followers of any of the conditions of this license, or of any of the provisions of the Burma Forest Act, 1902, or of the general rules thereunder, or of the Burma Game Rules, 1917, shall render this license liable to cancellation and the trophies and all other parts of the game killed thereunder to

confiscation in addition to any penalty which may be prescribed under the said Act and Rules and shall be deemed a valid reason for refusal to grant a subsequent license under Rule 9.

*Divisional Forest Officer,
Forest Division*

Place—

Date—

Signature of license-holder—

Date of receipt of license—

15. Notwithstanding anything in the foregoing rules, special game licenses valid for such areas and such periods and subject to such conditions as may be prescribed therein may be issued under the orders of the Local Government.

16. Whoever commits a breach of any of the foregoing rules which is not punishable under Section 4 of the Wild Birds and Animals Protection Act, 1912, or under Section 54 of the Burma Forest Act, 1902, shall be punishable with fine which may extend to fifty rupees or, when the damage resulting from his offence amounts to more than twenty-five rupees, to double the amount of such damage or five hundred rupees, whichever sum is less.

CENTRAL PROVINCES.

Notification No. 1263, dated 28th October, 1907, as amended by Notification No. 888, dated 27th September, 1913.

Rules relating to shooting, etc., in Government Reserved Forests in the Central Provinces.

1. The poisoning or dynamiting of rivers, streams or tanks is prohibited.
2. The Conservator of Forests of the Circle shall prepare in October of each year a list of forests which shall be closed to the public generally for hunting, shooting, fishing, netting, or setting traps and snares. The list shall specify those forests which are closed :—(a) absolutely for purposes of forest management or as sanctuaries for the protection of game, other than *carnivora*; (b) conditionally, subject to the issue of a permit in accordance with the rules hereinafter following. The list shall be published in the *Central Provinces Gazette* and a copy shall be hung up for information in the offices of the Deputy Commissioner and Forest Divisional Officer. No permit shall ordinarily be granted for forests under complete systematic fire-protection between the 15th February and the 30th June, except to approved sportsmen for the hunting and killing of carnivorous animals and of such other animals as may be expressly mentioned in the permit.

3. As soon as the list is published under Rule 2, the forests of each division shall be divided off into convenient shooting blocks by the Deputy Commissioner and Divisional Forest Officer in consultation, with the approval of the Conservator of the Circle.

4. Permits under Rule 2 shall be of two kinds, i.e., District and Block permits, and shall, subject to the control of the Conservator, be issued by the Divisional Forest Officer on behalf of the Deputy Commissioner. The former shall be valid for any forest in the district or division for which they are issued, subject to the conditions of Rule 2 and to the reservation in respect of occupied blocks as set forth in Rule 5. Block permits shall ordinarily be valid for one block only, but may cover two blocks when there are no applicants for the surplus blocks. Provided that wounded game may be pursued into an adjoining district or block.

5. The following classes of officers, when travelling on duty, are exempted from taking out a permit:—All Heads of Departments; Officers of the Central Provinces Commission; Gazetted Forest Officers; Gazetted Officers of the Central Provinces Police; Superintending Engineers, Irrigation Circle. Other officers whose duties require them to travel over the whole Province. Officers exempted from taking out a permit, as also district permit-holders, may stalk or track in any forest open for shooting, but they shall not tie up, beat or drive in any block for which a block permit has been issued provided the holder of such permit is himself

present in the area covered by his permit. If such exempted officers or district permit-holders wish to reserve entirely any given block for their own sport, they must take out a block permit for the same.

6. Except *carnivora*, only a limited head of game shall be allowed to be killed in any shooting block in any one year. On this limit being reached the block shall subject to the exception in favour of block permit-holders permitted under Rule 11, be closed for the remainder of the season as a matter of course. It shall also be within the discretion of the Conservator to prohibit the driving of any animals other than *carnivora* in any specified block.

7. The Deputy Commissioner and Divisional Forest Officer, subject to the approval of the Conservator, shall fix the limit of game which may be allowed to be killed in each block under the above rule. They shall, at the same time, subject to similar approval, fix for each block the number of head of specified game to be shot by any one person under a permit. The number so fixed shall be on a sliding scale based on the duration of the permit according as it is for fifteen days, one month or over one month. The aggregate of game of each species allowed to be killed by any one person, whether holding a permit or not, during the season (1st November to the 31st October) in each Forest Division shall be similarly fixed. Provided that, except with the special permission of the Conservator, the aggregate of game of the following species allowed to be killed by any one person in the forests of the Provinces during the year from the 1st November to the 30th October, shall

not exceed the following :—(1) two buffaloes ; (2) two bison ; (3) three barasingha ; (4) four cheetal ; (5) four sambhar.

8. When any officer exempted under Rule 5, or any holder of a district permit shoots an animal of any of the five kinds mentioned in Rule 7, he shall at once inform the Forest Divisional Officer what he has shot and in which block he has shot it.

9. Game books shall be kept up in the Divisional and the Range Offices in the appended form showing the number of heads of protected animals permitted to be shot and the number shot up to date.

Note.—After the end of each year the Chief Conservator will compile, from an annual statement to be submitted to him by each Conservator, a statement showing the number and kind of protected game shot by each officer and sportsman.

10. Exempted officers and holders of district permits shall be required, before shooting in any block, to make themselves acquainted with the number of head available for shooting, and this number may not be exceeded.

11. Block permit-holders may exceed this limit so long as they do not shoot in excess of the number entered in their permits ; but any excess over the block limit caused by such permit-holders shooting up to the full number of game allowed by their permits will be considered by the Forest Divisional Officer when fixing the block limits for the succeeding year.

12. Every permit shall specify the number of sportsmen who are authorized by it to shoot, and may limit the number of retainers and of dogs and other animals that may be taken into the forest.

13. The permit shall have entered upon it the number and kind of game which may be killed. As soon as he leaves the shooting block or district, the permit-holder shall return his permit to the Divisional Forest Officer, endorsing upon it the number and kind of game killed.

14. No application should be made for a block permit more than three months or less than one month before the date on which it is desired to make use of it; provided that in the case of a resident of the district, a notice of fifteen days shall be considered sufficient and that permits for short periods, not exceeding ten days, may be granted on application.

14A. No person shall hold more than one block at the same time except as provided in Rule 4; provided that two sportsmen shooting together may take two blocks in the same district for the same period. The following certificate to be signed by the permit-holder shall be printed in red ink on a detachable slip added to the permit:—

“I certify that I have read the rules printed on the back of my shooting permit and that I comply with the same; also that I will not transfer my permit to any

other person and that I will return it at the earliest possible moment should I find that I am unable to utilize it."

The certificate shall be returned to the Forest Divisional Officer when the permit-holder receives the license.

15. The duration of a permit shall be determined by the demand for shooting blocks. In no case shall it exceed three months. Provided that Gazetted Officers of the District staff, other than those exempted under Rule 5, and, when the district forms part of their charge, Executive Engineers, Assistant Engineers and Inspectors of Schools may be given a permit to cover the whole year (1st November to 31st October).

16. Permits are not transferable.

17. Sportsmen shall not sit up for the purpose of shooting any animals, other than *carnivora*, over water or over salt-licks or over paths leading directly to water or to a salt-lick.

18. The holder of the permit shall camp only on such regular camping grounds as may have been set apart by the Forest authorities, or in places specially pointed out to him by a Forest Officer.

19. A permit may be cancelled at any time by the officer granting it, or by the Conservator of Forests. Any breach of the Forest Act or of any rule made

under the Act, if committed by the holder of the permit or any of his retainers or followers shall render the permit liable to cancellation. Permits are liable to be declared invalid in regard to any particular forest in case of fire breaking out in any part of the forest, or in case of unwarrantable interference with forest work.

20. The holder of a permit is not exempted from liability under the Forest Act, or any other law, for anything done in contravention of such Act or law, or for any damage caused by him, his retainers or followers.

Note.—Section 25 of the Forest Act prescribes penalties for breach of these rules. And section 67 of the Act empowers the Divisional Forest Officer to compound any such breach on payment of a sum of money.

21. Permit-holders may not enter any forest without previously giving 24 hours' notice to the local forest official.

22. Every permit-holder must pay for a Forest Guard to accompany him and his camp during the time he is within Government forest limits, whose sole duty it will be to see that none of the Forest rules are infringed by the permit-holder or his followers: Provided that in exceptional cases in which permit rights are exercised only at irregular intervals and for short periods, the Conservator of Forests or the Deputy Commissioner of the District may exempt permit-holders from this payment.

23. A permit issued under these rules does not authorize the destruction of any kind of bird other than the game and edible birds included in the list appended (Appendix A), and birds of prey. Provided that the shooting or snaring of any kind of bird may be permitted to *bona fide* naturalist for the purpose of scientific collection, in limited numbers to be regulated by the Divisional Forest Officer.

24. A close season is fixed for the birds and animals entered in Appendix B. The destruction of any bird or animal during the close season fixed for such bird or animal is prohibited. Any animal of the species mentioned in Rule 7 shot contrary to the provisions of this rule shall be counted in the permit-holder's aggregate provided for in Rule 7.

25. Nothing in these rules shall prevent the disposal by auction sale, contract, or otherwise of the shooting or fishing within any forest or part of a forest, but no such disposal shall be made without special sanction previously obtained in each case.

Note.—Shooting in the C Class forests of Berar is also regulated by the Notification applying to the A Class forests, as further amended by Notification No. 184, dated the 5th March, 1914, as follows :—

Subject to the provisions of Act XI of 1878 (an Act to consolidate and amend the law relating to arms, ammunition and military stores) as applied to Berar,

any person may hunt, shoot, fish or set traps, subject to the following conditions:—

- (1) The poisoning and dynamiting of rivers and other waters is prohibited.
- (2) The hunting, shooting or trapping of the animals and birds during the close or breeding season entered in Appendix B is prohibited.

APPENDIX A.

List of game and edible birds.

Name.	Systematic name.			Vernacular name.
Sand-grouse ..	Pterocles fasciatus ..	..	..	Bhat titar, Dongar-kouri.
	Do. exustus ..	..	..	Do.
Pea-fowl ..	Pavo cristatus ..	..	..	Mor manzur.
Jungle-fowl ..	Gallus ferrugineus ..	..	..	Jungli murg.
	Do. sonnerati ..	..	..	Do.

APPENDIX A—contd.

Name.	Systematic name.	Vernacular name.
Spur-fowl ..	{ Galloperdix spadiceus .. Ditto lunulatus ..	{ Chhoti jungli murgi. Ditto.
Partridge ..	{ Francolinus vulgaris .. Ditto pictus .. Ortygornis pondiceriana ..	{ Kala titar.] Ditto. #] Gora titar.
Quail ..	Coturnix coromandelica ..	Chinuk,
Bush-quail ..	{ Perdicula argoonda .. Ditto Asiatica .. Microperdix Blewitti ..	{ Lawa. Ditto. Sirsi lawa.
Bustard-quail ..	{ Turnix pugnax .. Ditto jondera .. Ditto dussumieri ..	{ Gundru. Ditto. Tura dabki.
Bustard ..	Eupoditis Edwardsii ..	Hom tokdur.
Lik-floriken ..	Sypheotides aurita ..	Tun mor.

APPENDIX A—concl'd.

Name.	Systematic name.			Vernacular name.
Spurred-goose ..	<i>Sarkidiornis melanonotus</i>	..	..	Nukta.
Goose-teal ..	<i>Nettopus coromandelianus</i>	..	..	Girga.
Whistling-teal ..	<i>Dendrocygna arcuata</i>	..	..	Silli.
Grey-duck ..	<i>Anas poecilorhyncha</i>	..	..	Garmpai.
Green-pigeon ..	<i>Coroopus phornicopterus</i>	..	..	Harrial.
	Ditto <i>chorigaster</i>	..	..	Ditto.
Blue-rock-pigeon ..	<i>Columba intermedia</i>	..	..	Kabutar.
Doves ..	<i>Turtur meena</i>	..	..	Kala fachta.
	Ditto <i>cambayensis</i>	..	..	Tortru fachta.
	Ditto <i>suratensis</i>	..	..	Chitroka fachta.
	Ditto <i>risorius</i>	..	..	Dor fachta.
	Ditto <i>songalensis</i>	..	..	Seroti fachta.

Migratory, marsh and water-birds, such as duck, teal, snipe, etc., which do not breed in these Provinces and visit them in the cold season only.

APPENDIX B.

Close season for birds and animals.

Name.	Close time.
Sand-grouse	1st January to 30th June.
Painted Partridge	1st June to 30th November.
Grey Partridge	1st March to 30th September.
Peahen	1st May to 30th November.
Jungle-ben	} 1st March to 30th September.
Spur-fowl	
Rain-quail	1st May to 30th November.
Bush-quail	1st April to 31st October.
Bustard-quail	} 1st May to 30th November.
Bustard	
Lik-floriken	} 1st June to 30th November.
Comb duck	
Cotton-teal	} 1st June to 30th November.
Whistling-teal	
Spotted-billed duck	} 1st April to 31st October.
Painted snipe	

APPENDIX B—contd.

Name.					Close time.
Heron	} Whole year.
Egret	..	..	..	..
Kingfisher	..	..	..	..
Roller	..	..	..	..

Deer and Antelope other than Nilgai.

Does,* hinds and fawns	} Whole year.
Immature stags and bucks	..	..	..
Hornless stags	
Stags with horns in velvet	

Bison and Buffalo.

Cows and calves	Whole year.
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* Does of antelope in Berar may be shot with the permission, in writing, of Conservator of Forests, Berar Circle.

BERAR.

Notification No. 1119.—Nagpur, the 22nd November, 1911.—In exercise of the powers conferred upon him by Section 25 (i) and 75 (d) of the Indian Forest Act, as amended by Act XV of 1911, as applied to Berar, the Chief Commissioner is pleased to make the following rules relating to shooting in the Government Reserved Forests in Berar :—

A.—For the Reserved Forests, Class A.

1. The poisoning and dynamiting of rivers, streams and tanks is prohibited.
2. The Conservator of Forests of the Circle shall prepare, in October of each year, a list of forests which shall be closed to the public generally for hunting, shooting, fishing, netting, or setting traps and snares. The list shall specify forests which are closed :—
 - (a) absolutely, for purposes of forest management or as sanctuaries for the protection of game, other than *carnivora* ;
 - (b) conditionally, subject to the issue of a permit in accordance with the rules hereinafter following,

The list shall be published in the *Central Provinces Gazette* and a copy shall be hung up for information in the offices of the Deputy Commissioner and Forest Divisional Officer. No permit shall ordinarily be granted for forest under complete systematic fire protection between the 15th February and the 30th June, except to approved sportsmen for the hunting and killing of carnivorous animals and of such other animals as may be expressly mentioned in the permit.

3. As soon as the list is published under Rule 2, the forests of each division shall be divided off into convenient shooting blocks by the Deputy Commissioner and Divisional Forest Officer in consultation, with the approval of the Conservator of the Circle.

4. Permits under Rule 2 shall be of two kinds, i.e., *district* and *block* permits, and shall, subject to the control of the Conservator, be issued by the Divisional Forest Officer on behalf of the Deputy Commissioner. The former shall be valid for any forest in the district or division for which they are issued, subject to the conditions of Rule 2 and to the reservation in respect of occupied blocks as set forth in Rule 5. Block permits shall ordinarily be valid for one block only, but may cover two blocks when there are no applicants for the surplus blocks: Provided that wounded game may be pursued into an adjoining district or block,

5. The following classes of officers, when travelling on duty, are exempted from taking out a permit:—

All Heads of Departments.

Officers of the Central Provinces or Berar Commission.

Gazetted Forest Officers.

Gazetted Officers of the Central Provinces Police.

Superintending Engineer, Irrigation Circle.

Officers exempted from taking out a permit, as also district permit-holders, may stalk or track in any forest open for shooting, but they shall not tie up, beat or drive in any block for which a block permit has been issued, provided the holder of such permit is himself present in the area covered by his permit. If such exempted officer or district permit-holders wish to reserve entirely any given block for their own sport, they must take out a block permit for the same.

6. Except *carnivora* only a limited head of game shall be allowed to be killed in any shooting block in any one year. On this limit being reached, the block shall, subject to the exception in favour of block permit-holders permitted under Rule 11, be closed for the remainder of the season as a matter of course. It shall also be within the discretion of the Conservator to prohibit the driving of any animals other than *carnivora* in any specified block.

7. The Deputy Commissioner and Divisional Forest Officer, subject to the approval of the Conservator, shall fix the limit of game which may be allowed to be killed in each block under the above rule. They shall at the same time, subject to similar approval, fix for each block the number of head of specified game to be shot by any one person under a permit. The number so fixed shall be on a sliding scale based on the duration of the permit, according as it is for fifteen days, one month or over one month.

The aggregate of game of each species allowed to be killed by any one person, whether holding a permit or not during the season (1st November to the 31st October) in each Forest Division shall be similarly fixed: Provided that, except with the special permission of the Conservator, the aggregate of game of the following species allowed to be killed by any one person in the forest of the Provinces during the year from the 1st November to the 31st October shall not exceed the following :—

- | | | |
|--------------------|--|-----------------------|
| (1) Two buffaloes. | \| | (3) Three barasingha. |
| (2) Two bison. | | (4) Four cheetal. |
| (5) Four sambhar. | | |

8. When any officer exempted under Rule 5, or any holder of a district permit shoots an animal of any of the five kinds mentioned in Rule 7, he shall at once

inform the Forest Divisional Officer what he has shot and in which block he has shot it.

9. Game books shall be kept up in the Divisional and the Range Offices in the appended form, showing the number of heads of protected animals permitted to be shot and the number shot up-to-date.

NOTE.—After the end of each year the Chief Conservator will compile, from an annual statement to be submitted to him by each Conservator, a statement showing the number and kind of protected game shot by each officer and sportsman.

10. Exempted officers and holders of district permits shall be required, before shooting in any block, to make themselves acquainted with the number of head available for shooting, and this number may not be exceeded.

11. Block permit-holders may exceed this limit so long as they do not shoot in excess of the number entered in their permits; but any excess over the block-limit caused by such permit-holders shooting up to the full number of game allowed by their permits will be considered by the Forest Divisional Officer when fixing the block limits for the succeeding year.

12. Every permit shall specify the number of sportsmen who are authorized by it to shoot, and may limit the number of retainers, and of dogs and other animal that may be taken into the forest.

13. The permit shall have entered upon it the number and kind of game which may be killed. As soon as he leaves the shooting block or district, the permit-holder shall return his permit to the Divisional Forest Officer, endorsing upon it the number and kind of game killed.

14. No application should be made for a block-permit more than three months, or less than one month, before the date on which it is desired to make use of it: Provided that, in the case of a resident of the district, a notice of fifteen days shall be considered sufficient and that permits for short periods, not exceeding ten days, may be granted on application.

14A. No person shall hold more than one block at the same time except as provided in Rule 4: Provided that two sportsmen shooting together may take two blocks in the same district for the same period.

The following certificate to be signed by the permit-holder shall be printed in red ink on a detachable slip added to the permit:—

“I certify that I have read the rules printed on the back of my shooting permit and that I will comply with the same; also that I will not transfer my permit to any other person and that I will return it at the earliest possible moment should I find that I am unable to utilize it.”

The certificate shall be returned to the Forest Divisional Officer when the permit-holder receives the license.

15. The duration of a permit shall be determined by the demand for shooting blocks. In no case shall it exceed three months: Provided that Gazetted Officers of the District staff, other than those exempted under Rule 5, and when the district forms part of their charge, Executive Engineers, Assistant Engineers and Inspectors of Schools may be given a permit to cover the whole year (1st November to 31st October).

16. Permits are not transferable.

17. Sportsmen shall not sit up for the purpose of shooting any animals, other than *carnivora*, over water or over salt-licks or over paths leading directly to water or to a salt-lick.

18. The holder of the permit shall camp only on such regular camping grounds as may have been set apart by the Forest Authorities, or in places specially pointed out to him by a Forest Officer.

19. A permit may be cancelled at any time by the officer granting it, or by the Conservator of Forests. Any breach of the Forest Act or of any rule made thereunder if committed by the holder of the permit or any of his retainers or

followers shall render the permit liable to cancellation. Permits are liable to be declared invalid in regard to any particular forest in case of fire breaking out in any part of that forest, or in case of unwarrantable interference with forest work.

20. The holder of a permit is not exempted from liability under the Forest Act or any other law, for anything done in contravention of such law, or for any damage caused by him, his retainers or followers.

NOTE.—Section 25 of the Forest Act prescribes penalties for breach of these rules. And Section 67 of the Act empowers the Divisional Forest Officer to compound any such breach on payment of a sum of money.

21. Permit-holders may not enter any forest without previously giving 24 hours' notice to the Local Forest Official.

22. Every permit-holder must pay for a Forest Guard to accompany him and his camp during the time he is within Government forest limits, whose sole duty it will be to see that none of the Forest Rules are infringed by the permit-holders or his followers :

Provided that in exceptional cases in which permit rights are exercised only at irregular intervals and for short periods, the Deputy Commissioner of the District may exempt permit-holders from this payment.

23. A permit issued under these rules does not authorize the destruction of any kind of bird other than the game and edible birds included in the list appended (Appendix A) and birds of prey: Provided that the shooting or snaring of any kind of bird may be permitted to *bona fide* naturalists for the purpose of scientific collection, in limited numbers, to be regulated by the Divisional Forest Officer.

24. A closed season is fixed for the birds and animals entered in Appendix B. The destruction of any bird or animal during the closed season fixed for such bird or animal is prohibited. Any animal of the species mentioned in Rule 7 shot contrary to the provisions of this rule shall be counted in the permit-holder's aggregate provided for in Rule 7.

NOTE.—The Conservator of Forests, Berar Circle, is authorized to permit the destruction of doe antelope in reserved forests where these animals are very numerous and are a serious menace to cultivation.

25. Nothing in these rules shall prevent the disposal by auction, sale, contract, or otherwise of the shooting or fishing within any forest or part of a forest, but no such disposal shall be made without the special sanction of the Chief Commissioner previously obtained in each case.

APPENDIX A.

Name.	Systematic name.	Vernacular name.
Sand-grouse ..	{ Pterocles fasciatus	Bhat titar, Dongar kouri.
	{ Ditto exustus	Ditto.
Peafowl ..	{ Pavo cristatus	Mor manzur.
Jungle-fowl ..	{ Gallus ferrugineus	Jungli murgi.
	{ Ditto sonneratii	Ditto.
Spur-fowl ..	{ Galloperdix spadiceus	Chhoti jungli murgi.
	{ Ditto lunulatus	Ditto.
Partridge ..	{ Francolinus vulgaris	Kala titar.
	{ Ditto pictus	Ditto.
	{ Ortygornis pondicoriana	Gora titar.
Quail ..	{ Coturnix coromandelica	Chinuk.
	{ Perdicola argoonda	Lawa.
Bush-quail ..	{ Ditto Asiatica	Ditto.
	{ Microperdix Blewitti	Sirsi lawa.
	{ Turnix pugnax	Gundru.
Bustard-quail ..	{ Ditto Joudora	Ditto.
	{ Ditto dussumieri	Turn dabki.

APPENDIX A—contd.

Name.	Systematic name.	Vernacular name.
Bustard ..	<i>Eupoditis Edwardii</i> ..	Hon tokdur.
Lik-floriken ..	<i>Syphieotides aurita</i> ..	Tun mor.
Spurred-goose ..	<i>Sarkidionis melanonotus</i> ..	Nukta.
Goose-teal ..	<i>Netopus coronandelianus</i> ..	Girga.
Whistling-teal ..	<i>Dendrocygna arcuata</i> ..	Sih.
Grey-duck ..	<i>Anas poecilorhyncha</i> ..	Garmpai.
Green pigeon ..	<i>Corcepus phornicopterus</i> ..	Harial.
Blue-rock-pigeon ..	<i>Ditto chlorigaster</i> ..	Dito.
	<i>Columba intermedia</i> ..	Kabutai.
	<i>Turtur meena</i> ..	Kala fahta.
	<i>Ditto cambayensis</i> ..	Tortru fahta.
	<i>Ditto suratensis</i> ..	Ohitroka fahta.
	<i>Ditto risorius</i> ..	Dor fahta.
Doves ..	<i>Ditto senegalensis</i> ..	Seroi fahta.

Migratory, marsh and water-birds, such as duck, teal, snipe, etc., which do not breed in these Provinces, and visit them in the cold season only.

APPENDIX B.

Name.	Close season.
Sand-grouse	1st January to 30th June.
Painted partridge	1st June to 30th November.
Grey partridge	1st March to 30th September.
Peahen	1st May to 30th November.
Jungle-hen	} 1st March to 30th September.
Spur-fowl	
Rain-quail	1st May to 30th November.
Bush-quail	1st April to 31st October.
Bustard-quail	} 1st May to 30th November.
Bustard	
Lik-floriken	
Comb-duck	} 1st June to 30th November.
Cotton-teal	
Whistling-teal	
Spotted-billed duck	} 1st April to 31st October.
Painted snipe	

APPENDIX B—*contd.*

Name.					Close time.
Hérons	} Whole year.
Egrets	..	..	..	..
Kingfishers	..	..	..	..
Rollers	..	..	..	..

Deer and Antelope other than Nilgai.

Does, hinds and fawns	} Whole year.
Immature stags and bucks	..	..	..
Hornless stags	
Stags with horns in velvet	

Bison and Buffalo.

Cows and calves	Whole year.
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APPENDIX B—concl'd.

Block_____

Kind of game.	Number of head allowed to be shot.	Date of shooting.	Name of sportsman with number shot.	Balance of game available for shooting.
Buffalo	1st head	..	..
	..	2nd „	..	..
	..	3rd „	..	..
		etc.	..	..
Bison
Barasingha
Cheetal
Sambar

B.—For Reserved Forests, Class C.

1. Subject to the provisions of Act XI of 1878 (an Act to consolidate and amend the law relating to arms, ammunition and military stores), as applied to

Berar, any person may hunt, shoot, fish or set traps subject to the following conditions :—

- (1) The poisoning and dynamiting of rivers and other waters is prohibited.
- (2) The hunting, shooting or trapping of the animals and birds mentioned below is prohibited during the closed or breeding seasons assigned as follows :—

Throughout the year.

1. Cow bison.
 2. Doe sambhar.
 3. Doe cheetal.
 4. Stag sambhar
 5. Stag cheetal
- } When hornless or in velvet.

1st April to 30th September.

1. Bustard (*Eupoditis Edwardsii*).
2. The Grey partridge (*Ortygornis pondicceriana*).
3. The Painted partridge (*Francolinus pictus*) (*Francolinus vulgaris*).

4. Quail of all kinds (except Grey quail) (*Corturnix coromandelica*).
5. Spur-fowl (*Galloperdix spadiceus*) (*Galloperdix lunulatus*).
6. The Jungle-hen (*Gallus sonneratii*).
7. Blue, Rock or Wild pigeon.
8. The Florican (*Sypheotides auritus*).
9. Pea-hen (*Pavo cristatus*).
10. Hares (*Lepus timidus*).
11. Four-horned deer (*Chasingha*).
12. Rib-faced deer (Jangli Bakri, Kakur or *Cervus muntjac*).
13. Doe antelope.
14. Doe chinkara.

1st April to 30th August.

1. Common Sand-grouse (*Pterocles fasciatus*).
2. Painted Sand-grouse (*Pterocles exustus*).

Any infringement of these regulations is punishable under Section 25 of the Indian Forest Act.

Notification No. 14.—Nagpur, the 3rd January, 1914.—In exercise of the power conferred by Section 3 of the Wild Birds and Animals Protection Act, VIII of 1912, as applied to Berar by Government of India, Foreign Department, Notification No. 3510 I. B., dated the 3rd November, 1913, the Chief Commissioner is pleased to declare, throughout Berar, a close time for the following birds and animals as specified against each :—

Names.	Close time.
Sand-grouse	1st January to 30th June.
Painted partridge	1st June to 30th November.
Grey partridge	1st March to 30th September.
Pea-hen	1st May to 30th November.
Jungle-hen	} 1st March to 30th September.
Spur-fowl	
Rain-quail	1st May to 30th November.
Bush-quail	1st April to 31st October.
Bustard-quail	} 1st May to 30th November.
Bustard	
Lik-floriken	
Comb duck	
Cotton-teal	} 1st June to 30th November.
Whistling-teal	
Spotted-billed duck	

Names.	Close time.
Painted snipe	1st April to 31st October.
Heron	} Whole year.
Egrets	
King-fishers	
Rollers	

Deer and Antelope other than Nilgai.

Does, hinds and fawns	} Whole year.
Immature stags and bucks	
Hornless stags	
Stags with horns in velvet	

Bison and Buffalo.

Cows and calves	Whole year.
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Note.—The declaration of a close time so far as it relates to does of black buck, shall be withdrawn, until further orders, throughout Berar.

2. The declaration referred to above is also withdrawn in respect of cheetal hinds in the following areas of Berar for such periods, in favour of such persons and in respect of such number of animals as the Commissioner in consultation with the Conservator of Forests may decide :—

- (1) Bhongaon Reserve, in the Buldana District.
- (2) Tipeshwar Reserve, in the Yeotmal District.
- (3) Tiwsala " " " "
- (4) Gondwakri " " " "
- (5) Pathroat " " " "

CHAMBA STATE.

For the better regulation of shooting within the Chamba State, His Highness the Raja of Chamba has divided the shooting grounds into blocks, and the following rules regulating the shooting therein are in force :—

1. No person is allowed to shoot in any part of Chamba State without the special permission of His Highness the Raja of Chamba, except the villagers, who

have got licenses and can shoot on their own lands. Permit for shooting Big Game.—Such a permit will be granted on payment of a fee of Rs. 25 and will entitle the holder to shoot big and small game within the block assigned during a period not exceeding two calendar months from the date of arrival within the block. Sportsmen when applying for a license, should state the block within which they wish to shoot and the date from which the license will have effect. Maps showing the sub-division of the shooting grounds into blocks are available at Rs. 2 per copy and may be had on application to the Private Secretary to His Highness the Raja. Applications for permits will not be received before 1st January each year, and blocks will be assigned according to priority of receipt of the application. The fee is payable in advance and should accompany the application for a permit. The Raja may refuse to give a permit, without assigning any reason. In such case the fee will be returned. Only a restricted number of permits will be issued in one shooting season, and of these, a proportion will be reserved for officers on duty and residents in Dalhousie and Bakloh.

2. Permit for shooting Small Game.—Such a permit will be granted on payment of a fee of Rs. 10. There is no limit to the issue of such permits. Small game may be shot anywhere outside the shooting blocks. Permits are not transferable and will not be issued to professional shikaris. The number of the following animals to be shot will be limited as follows :—Thar 2, gooral 4, ibex 1, serrow 2, brown bear 1, barking deer 4. (*Note*.—There is no limit to the number of leopards

and black bears.) The shooting of the following is strictly prohibited :—Red deer (*bara sing*), musk deer (*rauns*), moonal pheasant (*nulgar*), tragopan pheasant (*argus* or *fulgar*), pea-fowl (*mour*). If any doubt is entertained with regard to area, information about it can be obtained from the office of the Private Secretary to His Highness the Raja of Chamba by writing. All beating for game is strictly prohibited. The shooting of partridges is prohibited from the 1st of March to 15th of September and pheasants are not be shot from the 1st of March to 1st of October. Applications for shooting permits should be made to the Private Secretary to His Highness the Raja of Chamba. Any person holding a shooting permit, and who wishes to employ a shikari, must select him from among the registered shikaris. A list of registered shikaris is kept at His Highness' Office and applications for the list should be made to the Private Secretary.

3. In order to keep a record of game shot in Chamba, shikaris on engagement will be provided with cards, and sportsmen are requested to fill in them the correct number of animals and birds shot. When a shikari is not engaged the sportsmen are themselves requested to supply this information to the Private Secretary so that he may make the requisite entries in the registers. They should mention the date on, and the locality in which, the game was shot. His Highness reserves the right for himself, his family and guests to shoot in any block at all times.

CHITRAL.

The following game laws are in force in Chitral :—

Small Game.—1. No persons, other than a Chitrali shall take or kill small game, except under a license, obtainable from the Assistant Political Agent, on payment in advance of Rs. 5 (this does not include the holders of Big Game License I and II). Men of the Garrison pay no license fee, but will only be allowed to take or kill small game, within the specified area, which is on left bank of Chitral River : From Drosh Fort to right bank of Beori Nullah. On right bank of Chitral River : From right bank of Kaogol to left bank of Jinjorette.

2. The trapping or snaring of small game is prohibited. The shooting of pheasants and Chukor from 1st March to 30th September, both dates inclusive, is prohibited. The driving of small game in big game nullahs is prohibited after 31st October, except in Bimboret nullah.

Big Game.—1. No person, other than a Chitrali, shall shoot at or kill big game except under and in accordance with the conditions of a license issued by the Assistant Political Agent, Chitral. Applications for licenses must be accompanied by the prescribed fee. Licenses will be issued as follows :—

1. On payment of a fee of Rs. 30 a license will be issued entitling the holder to shoot the following animals only :—(a) Markhor 3, (b) Ibex 3, (c) Oorial 3, (d) Brown

Bear 1, (e) Musk deer (male or female) 1, (f) black bear, panther and snow leopard unlimited—and to the employment of bodyguard for one shoot free. Thereafter he will have to pay for any guards used. II. A special license, for which Rs. 15 will be charged and which may be repeated, will enable the holder to kill one Musk Deer (male or female). The issue of any of the above licenses may be refused if circumstances require it. Licenses are valid from the day of issue to the 15th day of September following: License-holders are permitted to shoot in the following nullahs *only*:—Ustich, Artsu, Deghiri, Zidig, Ralao Gol, Mushen Gol, Birzin, Gufti Gol, Bagosht, Uni, Sirwir, Spitti Gol, Ughutti, Utrai Gol, Agram, Besti, Ano, Golen Gol, Urgutch, Rambur, Achalgah, Bomboret, Ayun Slopes, Mashkor, Brir, Kao Gol, Jinjoret, Swir and Dam, Bromalu, Paitasun, Cuchar and Patti Gol, Chuchukeni, Grun Gol, Kesu, Shishi right bank, Shishi left bank, Drosch, Beori, Ashreth.

2. Any of the above nullahs are liable to be closed at any time by the order of the Assistant Political Agent. The method of allotting these nullahs is left to the decision of the general body of license-holders with the proviso that no nullah may be shot in for more than 10 days or by more than 1 gun in a month. Sportsmen are requested to refrain from asking permission to shoot in private nullahs. Invitations to shoot in such Nullahs may not be accepted without the concurrence of the Assistant Political Agent. The following are considered shootable heads: markhor, 40 inches; ibex, 38 inches; oorial, 23 inches. The shooting of

red bear with cubs is prohibited. The driving of big game other than black bear, musk deer and panther is prohibited. The purchase of sporting* trophies other than the skins of black bear, panther and snow leopard is prohibited. Only men entered as such in the club register may be employed as head shikaris. Sportsmen must not allow their shikaris to shoot for them, nor must a sportsman allow his shikari to take his rifle for the purpose of following and killing an animal which he himself has wounded. The sale, presentation or loan of fire-arms or ammunition to natives of the country is prohibited.

Penalties.—Breaches of the foregoing rules will be dealt with by the Assistant Political Agent, Chitral. Every breach of these rules renders the offender liable to any or all of the following penalties :—Suspension or forfeiture of license ; fine not exceeding Rs. 50 ; confiscation of all sporting trophies obtained in Chitral. The Assistant Political Agent is authorized to refuse the renewal of a license to any person against whom the breach of these rules has been proved.

Note.—In the nullahs below and including the Utzun Nullah, it is necessary for officers to take a few men as escort when out shooting ; officers will not pay them, subject to the conditions under Big Game License (Para 1) noted above,

* Includes *ovis poli*.

but will give the men chits on the Assistant Political Agent stating the number of days' duty the man has done. The Assistant Political Agent will reward the men. Officers will probably give the escort a small tip, as they do to headmen if they are satisfied with work done ; but this is optional.

COORG.

I. Rules relating to hunting, shooting, fishing, the poisoning of water and the setting of traps or snares in the Reserved Forests in Coorg State :—

1. The poisoning or dynamiting of rivers or other waters is absolutely prohibited. Subject to the provisions of the Elephant Preservation Act (VI of 1879), hunting, shooting, fishing, snaring or trapping of any description shall not be allowed save under a license granted by the Deputy Conservator of Forests in Coorg, to be current for one year from the date of its issue ; provided that the Commissioner of Coorg shall have power on due cause being shown, to grant special licenses, to be current for specified periods, for the purpose of destroying any animal or animals dangerous to life. Provided also that Forest Officers of or above the rank of Extra Assistant Conservator, the Commissioner, the First Assistant Commissioner and the

Assistant Commissioner of Coorg shall not be required to take out a license under this rule. The license will be available for such forest area as may be prescribed by the licensing authority.

2. The following fees shall be charged for licenses :—(a) For all game—(i) for residents of Coorg and members of the Coorg Commission, Rs. 20 ; (ii) for visitors, Rs. 50 ; (b) for game other than bison—(i) for residents of Coorg and members of the Coorg Commission, Rs. 10 ; (ii) for visitors, Rs. 20. Persons resident at Hunsur who have constant business in Coorg and persons resident in any village in Mysore territory contiguous to the Coorg frontier shall for the purpose of this rule be considered to be residents of Coorg.

3. No person shall shoot at the females or immature males of bison, sambhar, cheetal or jungle sheep (muntjac) nor at any sambhar, or cheetal when in velvet, nor at any bull bison when with a herd. The term “immature males” in the case of sambhar means animals with horns less than 25 inches in length and in the case of cheetal means animals with horns less than 22 inches in length. The Deputy Conservator may at any time close wholly or partially any portion of any forest against shooting. No license-holder may sit up over water, salt-licks, or fruit trees or over paths leading thereto for the purpose of shooting animals other than *carnivora* and pigs. Whenever any animal is shot, the license-holder must report the fact to the Deputy Conservator stating where and when such animal was shot

and the length of its horns, or in the case of bison the spread and circumference at the base of the horns and at the conclusion of the year or when the license finally quits the shooting block, the license must be returned to the Deputy Conservator of Forests with a statement of what has been shot. Trophies must be produced for inspection whenever required before any person deputed for the purpose by the Deputy Conservator. No license-holder shall beat for game other than *carnivora* except with the special sanction of the Deputy Conservator. License-holders are bound to give to the nearest Forest Officer without delay information which they may possess regarding the commission or intention to commit any forest offence or regarding the occurrence of fire (Section 25 (b) of the Indian Forest Act, VII of 1878). Nothing in this license shall be deemed to permit the capture or removal of any living animal. A license granted under these rules shall not be transferable.

4. Every person to whom a license has been granted under these rules and who is found hunting, shooting, fishing, snaring or trapping in any forest to which these rules apply, shall on the demand of any Forest or Police Officer produce his license. Breach by a license-holder of any provision of the Forest Law or of any of these rules shall render the license liable to cancellation.

II. Under the powers conferred by Rules 2 and 5 of the aforesaid notification on the Deputy Conservator the following supplementary regulations

have been made :—The forest south of the Latchmannathra river road are divided into a convenient number of shooting blocks. Not more than one party will be permitted to shoot in any block at any one time. A party will be limited to 3 guns except with the previous permission of the Deputy Conservator. The allotment of blocks to persons intending to shoot will be made in the order in which applications are received. If two or more applications are received at the same time lots will be drawn by the Deputy Conservator at his office when any persons interested will be welcome to attend. In allotting each block the Deputy Conservator of Forests will intimate the date on which the party concerned will be allowed to occupy it. A party failing to occupy its block within three days of the date fixed, or subsequently vacating it for three days will lose its lien thereon. Subject to Rule 5 a party will have a lien on the block allotted to it ; but it will not have an exclusive right to the block as against members of the Coorg Commission who may if they hold, or are exempt from taking out licenses—shoot in any block whether allotted or not, subject to the etiquette usual among sportsmen. Should the number of blocks available be insufficient to provide for all those desirous of shooting it shall be open to the Deputy Conservator to fix a limit of time after the expiry of which any party called upon to do so must vacate the block occupied by it. Provided however that no party shall be called upon to vacate a block, until the expiry of three weeks from the date fixed for his occupation. The division into blocks referred to in Rule 4 shall remain in force until 1st July in each year or until such earlier date

as the Deputy Conservator may decide after which license-holders may shoot in any forests not closed to shooting.

III. The procedure to be adopted in applying for a license is as follows:— Application must be made to the Deputy Conservator of Forests, Mercara, Coorg, who will issue a license and at the same time will send the applicant a letter of advice on any Treasury in Coorg, or the Resident's Treasury at Bangalore, or on the Treasuries at Hunsur or Mysore. On receipt of this letter of advice the applicant must remit the necessary fee to the Treasury indicated and obtain a receipt, which must be shown to the Ranger in charge of the Forest Range in which the applicant wishes to shoot. The Rangers have orders not to allow the applicant to shoot until he produces the receipt. *The Deputy Conservator will not be responsible for any money sent to him in payment of license fees.* The forests south of the Latchmanatirtha river road are at present divided into 4 blocks. Those desirous of having a block allotted to them should say so when applying for a license. A plan of the block allotted will be sent to each applicant."

Licenses to kill Wild Elephants.

The following rules are, with the approval of the Governor-General-in-Council, prescribed by the Chief Commissioner of Coorg for the grant of licenses to kill Wild Elephants in Coorg.

1. Every application for the grant of a license to kill a wild elephant shall be made to the Commissioner of Coorg. Every license issued under this rule shall be engrossed on stamp paper of the value of Rs. 25 if the applicant is a resident of Coorg and Rs. 50 if the applicant is a non-resident. No license shall be granted to kill any elephant other than a mature male tusker. A mature male tusker is an elephant whose tusks weigh not less than 40 lb. the pair. The licensee is restricted to shooting at one elephant only and shall thereupon surrender his license to the nearest Forest Ranger. [*Note.*—The licensee is of course at liberty (and is indeed expected) to follow up a wounded elephant with a view to eventually killing it but may not wound another elephant without a fresh license. The Commissioner may, however, in special circumstance, endorse a license and thereby authorize the licensee to shoot at a second elephant on an additional payment of half the license fee.] A license shall remain in force for six months from the date of issue. All applications for the extension of the period of a license shall be made to the Commissioner who may extend the period of the license without further payment up to a limit of one year from the date of the original issue provided that no elephant has been fired at under the license in question. In all other cases the application for renewal shall be dealt with under the note to Rule 2. The Commissioner may also grant licenses on plain paper to kill particular elephants of savage and dangerous temper hereinafter called rogue elephants and certified by the Deputy Conservator of Forests to be rogues. Such licenses shall remain in force

for such period not exceeding six months, as may be determined by the Commissioner. On proof to his satisfaction that in any particular locality frequent injury is being done to crops, plantations or houses, by a herd of wild elephants, the Commissioner of Coorg may grant licenses on plain paper to selected land-holders of such locality, or to an officer or officers in Government service authorizing them to kill a given number of elephants or any particular elephant. Such licenses shall remain in force for a maximum period of three months or for a shorter period if thought desirable. The Commissioner shall report the grant of such licenses to the Chief Commissioner who may cancel them if he considers that the reasons for granting them are insufficient. A license under this rule may also be granted to persons other than those mentioned in the first part of the rule with the previous sanction of the Chief Commissioner. The license-holder shall kill wild elephants only in such forests or in such locality as may be named in the license, and shall produce the license upon the request of any Forest, Police or Revenue Officer of or above the rank of Forester, Sub-Inspector or Parpatigar, respectively. Immediate report of every elephant killed or wounded shall be made to the nearest Forest Ranger or Subedar, who shall communicate the fact at once to the Commissioner and to the Deputy Conservator of Forests. Except as provided in this rule, the tusks of any elephant that may be killed shall be the property of Government, but any person who has killed an elephant, in accordance with the terms of a license granted under these rules has priority of purchase and may retain the tusks of the elephant which he

has killed on payment of the full market price of the ivory contained in the tusks.

2. Provided (1) that in the case of elephants doing damage to crops, plantations or houses which have been killed by a land-holder or by an officer in Government service holding a license granted under Rule 1 and in the case of elephants killed by persons holding other licenses the Commissioner may, at his discretion, remit an amount not exceeding half the market price of the ivory. A license shall be liable to be withdrawn if any of the above rules is infringed. The Commissioner shall in consultation with the Deputy Conservator of Forests, fix the maximum number of licenses to be granted in each particular year.

Note.—In calculating the maximum number of licenses to be issued in a year, all rogues and males shot for any reason whatsoever should be taken into consideration.

(*Section 7 of the Elephants Preservation Act, 1879*).—"Whoever breaks any condition contained in a license granted under this Act shall be punished with fine which may extend to five hundred rupees. Any person convicted of a second offence under this section shall be punished with imprisonment which may extend to six months, or with fine, or with both. When any person holding a license under this Act is convicted under this section, such license shall become void and shall be delivered up to the convicting Magistrate."

DHOLPUR.

The Dholpur Game Act states :—

1. No person will be allowed to shoot, wound, kill, capture or otherwise destroy, any animal or bird. (Except those as specified in Appendix A.) The close season in the State for small game extends from 15th March to 15th September. Fishing on State tanks is not allowed (with nets or hooks). (a) The poisoning or dynamiting of rivers, streams and tanks is strictly prohibited. Fishing in front of temples or at feeding places is prohibited. (A license cannot be issued for these places.) Shooting migratory birds on State tanks is not allowed. Any person found firing at or disturbing by any other means the birds on the tanks will be heavily fined. (Tanks mean those which are specially preserved for duck-shooting such as Talshahi, Onrela, Narpura and Chateria.) Hunting with *dogs* or *chita* is prohibited. Pig-sticking is not allowed without permission.

2. There will be three kinds of licenses—(a) Free Season License : (b) Free Temporary License ; (c) Ordinary License.

(i) A free season license is granted by special favour of His Highness. (ii) A free temporary license is granted on a proper application form as specified in Appendix C for a limited number of animals and birds. (The period of this will not exceed 30 days.) (iii) An ordinary license is granted on a proper application form as above

with a fee of rupees five, for a limited number of animals and birds. (The period of this will not exceed 10 days.)

3. The authority granting a license may at any time modify, cancel, or withdraw it. Any person found shooting, wounding, killing or capturing without a proper license will be punished as specified in Appendix B. No license is required for royal guests. Shooting peacock, parrot, squirrel, jay, monkey, langur is strictly prohibited. Persons shooting these shall be liable to punishment of simple imprisonment for a term not exceeding 4 months, or a fine not exceeding Rs. 300. Any person is allowed to shoot, kill or wound an animal of game in self-defence, but he is required to report the matter without the least delay at the nearest tehsil shikar or police chouki.

APPENDIX A.

Rewards.

The following rewards are given on submission of heads and skins which shall not be returned :—

Red dog, Rs. 30 ; wolf, Rs. 15 ; hyena, Rs. 5 ; wild-cat, Rs. 2 ; jackal, Re. 1 ; fox, Re. 1 ; hawk, As. 8 ; black-cobra, As. 8.

The reward is reduced for *bachas* (under six months).

APPENDIX B.

Penalty for shooting and capturing without a *License*. (Besides the fine, the weapon found with the offender will be confiscated) :—

Tiger or tigress, Rs. 200 ; panther or pantheress, Rs. 50 ; bear, Rs. 40 ; sambhar, Rs. 50 ; spotted deer or cheetal, Rs. 100 ; gharial, Rs. 100 ; black-buck, Rs. 20 ; chink, Rs. 20 ; blue bull, Rs. 25 ; pig, Rs. 20 ; hare, Rs. 5 ; bustard, Rs. 15 ; partridge, Rs. 5 ; jungle fowl, Rs. 15 ; chakor, Rs. 15 ; quail, Rs. 5 ; green pigeon, Rs. 10 ; grouse, Rs. 5 ; black partridge, Rs. 7.

APPENDIX C.

(Form of Application.)

To

THE SHIKAR OFFICER,

DIHOLPUR.

Dear Sir,

I wish to shoot the following animal or bird and request you to please issue necessary license for the period of days.

Yours faithfully,

(Sd.) _____

Address _____

NOTE.—Permission to shoot tiger, panther, sambar, bear, cheotal is not ordinarily granted by the Durbar. When permission is granted, care must be taken to avoid shooting tigress, or pantheress or does with or without young.

"! Capturing or shooting small cubs is prohibited.

GWALIOR.

The Gwalior Wild Birds and Animals Protection Act (Sambat 1979) contains the following sections :—

Section 4.—It shall be unlawful : (a) to capture any scheduled bird or animal during the close time prescribed in respect of that bird or animal ; (b) to kill any such bird or animal which has not been captured before the commencement of its close time ; (c) to sell or buy or to offer to sell or buy or to possess any such bird or animal which has not been captured or killed before the commencement of its close time or the flesh thereof ; (d) if any plumage has been taken from any such bird captured or killed during its close time, to sell or buy or to offer to sell or buy or to possess such plumage.

Section 5.—(1) Whoever does or attempts to do any act in contravention of Section 4 or kills or captures or attempts to kill or capture or abets the killing or capturing any animal or bird in any area notified as a preserve under Section 11 of this Act without a *parwana* duly obtained, shall be punished with fine which may extend to fifty rupees. (2) Whoever, having already been convicted of an offence under this section is again convicted thereunder shall on every subsequent conviction, be punishable with imprisonment which may extend to one month, or with fine which may extend to one hundred rupees or with both.

Section 10.—The Government may, in the interests of scientific research or for any special reason, when such a course is desirable, grant any person a license subject to such restrictions and conditions as it may impose, entitling the holder thereof to do any act which is by Section 4 of this Act declared to be unlawful.

Section 11.—(1) The Government may, by notification in the Gwalior Government Gazette, notify any area to be a preserve. (2) It shall be unlawful to capture, kill or attempt to capture or kill or abet the capturing or killing of all kinds of birds or animals in a preserve. (3) The Private Secretary to His Highness the Maharaja Scindia may grant to any person a *parwana*, subject to such restrictions and conditions as he may impose entitling the holder thereof to do any act which is by Sub-Section (2) declared to be unlawful.

Close Time.

Close time for the following birds and animals is as follows :—

Ducks and geese of all kinds, 1st April to 15th September ; floricans and jungle fowl, 1st April to 14th September ; partridge and quails of all kinds, 1st March to 31st August ; pigeon green, 1st April to 31st August ; peafowl, whole year.

Hoopoe, rufous short-toed lark or ortolan, black drongo or king crow, jungle babbler or seven sisters, Indian oriole, black-headed oriole—the whole year.

Grey-headed mynah or common mynah, bank mynah, pied mynah, common hawk
cuckoo—the whole year. Herons, egrets and kingfishers—the whole year.

Blue Bull (males)—1st May to 30th September. Spotted deer (males)—1st
April to 31st December. Sambhar (males) and females and young of Sambhar or
Blue Bull—the whole year. Hunting leopard—the whole year. (*Note*.—Provided
that hunting leopard can be captured if a *parwana* is obtained in this behalf.)
Tiger—the whole year.

INDORE.

Notification No. 25 of 1907, issued in pursuance of Section 2 of the Indore Game
Act, 1907, contains the following rules:—

1. The following areas, exclusive of any Jagir areas, in which the shooting rights
vest in the Jagirdar, are preserves, namely:—(a) The forest lands of the Satpura
range from the frontier of British Nimar in the east to the Agra-Bombay road on the
west (to be known as “the Satpura Preserve”). (b) The forest lands in the Barwaha
Pergana to the east of the Indore-Khandwa Road (to be known as the Barwaha
Preserve”). (c) The forest lands of the Vindhya range from the Dewas frontier
on the East of the Indore District to the Manpur frontier on the West (to be known
as “the Western Vindhya Preserve”). (d) The forest lands of the Vindhya range

in the Nimawar District from the Bhopal frontier on the East to the Gwalior frontier on the West (to be known as "the Eastern Vindhya Preserve"). (e) The forest lands in the Nimawar District south and west of a line drawn from Fatehgarh on the Narbada to Baind, thence to Satwas, thence through Kantaphor to Singori, and thence following the spurs of the hills to Hatnori (to be known as "the Southern Nimawar Preserve"). (f) The forest lands of the Bhanpura and Rampura Districts bounded by a line drawn from the north-east point of the Pathar of the Kotah frontier along the eastern edge of the Pathar to Bhanpura thence through Khilchipur and Bhuj to Daili, thence due west to the Erda river, thence along the summit of the Western cliff of the Erda river to the Northern frontier of the State, and thence eastwards along the frontier to the north-east point of the Pathar (to be known as "the Pathar Preserve"). (g) The area enclosed by a line drawn round Rala Mandal hill at a distance of half a mile from the foot (to be known as "the Rala Mandal Preserve"). (h) The area bounded on the south-east as far as the Khan river bridge by the Railway line from Rao to Indore, and on the north by the Indore Betma Road as far as Naoda, including the Sukniwas, Shirpur and Nanda tanks (hitherto known as the Sukniwas, Shirpur and Hawa Bungalow Preserves and now to be known as "the Huzur Preserve"). (i) The area bounded on the south by the Indore-Betma road as far as Naoda, and on the north-east by a line from Indore to Bangarda and thence to Boraniya, including the tanks at Nenod (to be known as "the Bijasan Preserve"). (j) The tank at Depalpur.

2. The following kinds of animals and birds are deemed to be game, and the close season for them throughout the State is noted against the name of each :—Bison—the whole year. Deer and antelope—1st June to 31st October. Tiger, panther, bear and wild pig—nil. Jungle fowl and Spar fowl—1st March to 30th November. Sand grouse and partridge—1st April to 30th September. Lik-floriken—Cocks, 15th May to 31st July; hens, 15th May to 30th September. Quail (all kinds)—1st June to 30th September. Duck (all kinds), teal (all kinds), geese (all kinds), snipe (all kinds), and damosel crane—nil.

(1) The killing or capturing of the following kinds of game and birds is prohibited throughout the State :—Tiger, except under a special permit from the Durbar; immature stags; hornless stags; stags with horns in velvet; does, hinds, and fawns except under a special permit from the Conservator of Forests, or from the officer-in-charge of the Huzur and Ralamandal Preserves in respect of those Preserves; peafowl; sarus crane. Provided that this prohibition does not apply to the killing of tiger in *bona fide* defence of human life, nor the killing by the owner or occupier of land or by his *bona fide* farm-servants of any deer or antelope which he or they may find in the act of destroying his crops, unless the State revenue demand on the land is calculated to compensate him for such destruction.

(2) The killing of blue rock-pigeon is prohibited throughout the Rampura and Bhanpura Districts, and in towns and village sites in the other districts of the State,

except under a special permit from the Durbar. The killing otherwise than with a spear or capturing of wild pig within the area assigned each year to the Mhow Tent Club is prohibited except that they may be killed by an owner or occupier of land or by his *bona fide* farm-servants if found in the act of destroying his crops, unless the State revenue demand on the land is calculated to compensate for such destruction.

Explanation.—(a) Under this rule, wild pig may be killed if found in standing or harvested crops, but may not be killed, except with a spear, on land on which there is no crop at the time. (b) A professional shikari is not a *bona fide* farm-servant, and therefore may not be employed to kill wild pig under this rule. The killing and capturing of all kinds of game animals where they water is prohibited throughout the State.

In pursuance of Section 3 of the Indore Game Act, 1907, the Durbar have empowered the following officers specially to grant permits for shooting in Preserves :—

- (a) The household officer in respect of the Huzur and Ralamandal Preserves.
- (b) Such military officer whom the General Officer Commanding the 5th Mhow Division may appoint in respect of the portion of the Western Vindhya Preserve which lies between the Indore-Khandwa road and the Manpur frontier and within the Mhow Pergana.

Any one wishing to shoot on the Choli and Mandleshwar Tanks near the Nerbada river, Pergana Maheshwar, must apply to the Conservator of Forests, Indore State, for passes as is necessary in the case of the Depalpur Tank. Shooting without passes is forbidden.

In pursuance of Section 2 of the Indore Game Act of 1907, etc., the following areas have been declared preserves and protected areas :—

[Preserves.]

A. *Indore Forest Division* :—1. The main block of the Forest Reserve in Mandleshwar Range bounded—On the north by Rajgarh Bhumiya's territory, British Tahsil of Manpur and Forest of Choral Range. On the east by Bagol Pergana of Dewas State. On the south by the demarcation line of Mathonia, Ahliapura, Anuwalia, Sirsia, Gujarmahan, Tekwan, Barwail, Asapura, Temria Jagir, Maksi and Melkheri Garhi villages. On the west partly by Dhar State territory and partly by Kakarda village boundary and then again Dhar State territory. 2. The Lawani block bounded—On the north and east by Dhar State territory. On the south and west by the demarcation line of Dholi Baori, Lawani, Kesarpura, Ukhaldia, Faraspura, Umerban, Jammia, Choti Umerban, Arrabarra and Saoliakheri villages.

B. *Nemauwar Forest Division*:—The small area of Kuna adjacent to Rajor village Forest north of Kuna village to the west of nullah joining the River Narbada from Ajnas bounded on all sides by Forest demarcation line with boundary pillars through the village limits of Biloda, Kana Khurd, Kana Buzurg, Khair Kothada and Khanjipura of Kannode Pergana.

C. *Rampura Forest Division*:—Areas known as the (Pathar Preserve) the boundaries of which were given in the Notification No. 25 of 1907 are now revised and fixed as under:—

The forest lands of the Bhanpura and Rampura District bounded by the line of demarcation notified in *Gazette* No. 37, dated the 19th February, 1912, drawn from the north-east point of the Pathar on the Kotah frontier from village Dhantala along the eastern edge of the Pathar by villages of Motipura, Harigaon, Ketholi to Bhanpura. Thence along the demarcation line following close by the villages of Chainpura, Lorwara, Bunjar, Golumba, Gurla, Kuna, Harmatia, Gopalpura, Morki to Jallod thence to Salarmala, Chandrapura, along demarcation line *via* Majeria, Rampura to Narwali, from Narwali along the cleared 100 line and Chadrawat boundary west of Bhadana and Laltalai and south of Bagtuni; thence from between Chowkri and Kanjarda, the line will run south still along the Chandrawat boundary *via* Gotra, Nawgaon and Suwasra (Buzurg) to near Ruppur; thence below Pathar north of Parda *via* Datoli, Mal-khera to Pipalgurda towards the north-west point Besda

of the Pathar near the frontier, and from this point in an easterly direction along the frontier to the north-east point Dhantala of the Pathar (to be known as the Pathar Preserve).

D. *Khargone Forest Division* :—Areas known as the “Satpura Preserve,” the boundaries of which were given in the Notification No. 25 of 1907 are now more fully defined on 4 sides and fixed as under :—

The Forest lands of the Satpura range from the frontier of British Nimar in the east to the Agra-Bombay road on the west. In the south the frontier line between Indore State and British territories will be the boundary of this preserve while in the north the boundary will run from Balsamud on the Agra-Bombay road to Nagalwadi, Ketī, Deoli and thence from Sangwi to Barud and from there *via* a line from Mohana, Bistan, Jamli, Nagzhiri, Dasnawal, Signur, Anjangaon, Karniya, Chainpur to Pichodya.

[Protected Areas.]

A. *Indore Forest Division* :—The Nahar Zabuwa Forest block with an area round Khandel bounded :—On the north by the State Forest demarcation line and the Gwalior boundary and a line through parit and cultivated tracts about $1\frac{1}{2}$ miles

distant from and north of Khandel. On the east by Gwalior, Dhar, and Bagli States boundaries. On the south by Dhar State boundary. On the west by the State Forest demarcation line and a line through parit and cultivated tracts about a mile distant from and west of Khandel.

B. *Nemawar Forest Division*:—The area north of Nemawar bounded:—On the north by Barcha, Sandalpur and Rajgaon cart track. On the east by Goni Nallah. On the south by the River Narbada. On the west by Nemawar Ajnas cart track and Bagli river up to village Barcha.

C. *Rampura Forest Division*:—All the Forest Reserved Blocks in the Tarana Pergana as notified in *Gazette*. The area round Manasa, bounded:—On the north by up to Bhatkhedi village limit (about three miles). On the east by Mokhalpura up to village limit Sansari (about three miles). On the south by Sandio up to village limit (about 2 miles). On the west by Udepur and Gwalior State boundaries.

In pursuance of Section II of the Indore Game Act of 1907, etc., the following areas are declared to be preserves:—

(1) The main block, known as the Dhawara Para Kotunai Felling Series, bounded on north, west and south by the Jhabua State and on the east partly by demarcation line and partly by the Jhabua State. (2) The isolated Rasodi Forest

Block surrounded by Jhabua territory. (3) The isolated Forest Blocks of Kasar-bardi and Hanmantia bounded by Jhabua territory on the north, west and south and by Dhar State on the east.

Extract from Durbar Revenue Department Notification No. 12, dated the 15th October, 1915 :—

“ 1. Sambhars and cheetals even if found in standing crops in the Abadi shall not be shot for a period of three years anywhere except with permission. 2. Rewards for wild dogs should be enhanced from Rs. 10 to Rs. 15 per game. 3. In special cases to encourage the killing of troublesome panthers the skins of the animals shot with permission may be given to those who have shot them.”

Revenue Department Notification No. 7, dated the 4th December, 1918 :—“ As panthers are generally found along, and in Abadi areas, and as their number is decreasing due to no protection being afforded to them by the Indore Game Act, it is hereby notified, with the previous approval of the Chief Minister, that all sportsmen including district and touring officers should in future obtain a permit to shoot same from the Conservator of Forests. This notification however does not supersede the orders framed for the shooting of destructive panthers which have already been notified in the *Holkar Sirkar Gazette* No. 24 of 15th November, 1909.”

The waterspread areas of the Limbodi and Bilawali tanks and the area adjacent to them on the south and the south-east bounded by the village Kankars of Morod Ashrawad, Mirzapur and Khopta Kherdi are declared to be a Preserve to be known as the Bilawali and Limbodi Preserve.

In pursuance of Section 2 of the Indore Game Act of 1907 the Government have prohibited fishing in the Garbari river from a point where it crosses the Bombay-Agra road to its junction with the Khan river near the railway bridge.

JAMMU AND KASHMIR STATE.

These rules apply to all European and Indian residents and visitors, ladies as well as gentlemen, including all State subjects and officials, with the exception of those who have been specially exempted by order of His Highness the Maharaja. They are applicable to the Kashmir Province, the Astor Tehsil, including the Bunji Niabat, the Ladakh, Skardu, Kargil and Kishtwar Tehsils as at present existing, with the following exceptions :—

1. (a) All Jagir land belonging to General Raja Sir Hari Singh, (b) the Ilāqa of the Raja of Poonch ; and (c) all State Game Reserves which now exist or may be

hereafter formed. The existing *Rakhs* or State Game Reserves are:—(1) Chashma Shahi; (2) Dachigam, and the ridge of hills between 1 and 2; (3) Khonmoo, and the grass-farm between Sangri and Chak-Khonmoo; (4) Khrew; (5) Tral Cum Kerrim and Punjhair, as far as the Bhoogmor road; (6) Achabal; (7) Koolgam; (8) The Oora Nullah in the Lidder; (9) The Wangut Nullah in the Sindh Valley; (10) Khandi and Khoras in the Uri Nullah, the lower boundary of which is the new road to the Haji Pir; and (11) Hokar Sar Jhil.

2. The following nullahs which are the private shooting grounds of their respective Rajas, viz., Kapalu, Gundooos and Rumbaka Nullahs in Kharmang, Shigar, Rondn, Kiris, and also those portions of the Mantho and Satpur Nullahs demarcated in 1905 for the Rajas of Tolti and Skardn respectively, and the Harchoo Nullah in Astor for the Raja of Astor.

(i) The basin above Pandrittan is a sanctuary. (ii) In General Raja Sir Hari Singh's Jagir and in the Ilaqa of the Raja of Poonch no one is allowed to shoot without the permission of the General Raja Sahib and the Raja Sahib respectively. (iii) Permission to shoot in the nullahs referred to in Paragraph 2 above can only be obtained from the Rajas concerned. Such permission being subject to the conditions of Rule 15 of these laws. (iv) Shooting in any *Rakh* or State Game Preserves is strictly prohibited without special permission of the Durbar. (v) No one is permitted to shoot in the Jammu Province, except in Wardwan, Dachan, and

Paddar (which are part of the Kishtwar Tehsil) without a special pass from the Durbar. (vi) It is forbidden to enter or shoot in any of the Game Laws Sanctuaries and Game Reserves mentioned in Rules 6 and 12 without a special permit signed by the Secretary, Game Preservation Department. Nor is grazing or grass-cutting permitted except in the case of villagers who have village rights within the closed area. (vii) The undermentioned *mergs* on the north side of the Sindh Valley are closed for all grazing—Lang merg, Mohand merg, Lar merg, Kanya-dals and all intermediate ground. (viii) All demarcated forests in Kashmir are governed under the Forest Regulations, and offences under these regulations may be dealt with by the penalties prescribed therein.

3. Special rules are issued and a special permit (without which no one is permitted to travel or shoot) is required for:—(a) The Astor Tehsil, including the Bunji Niabat, which extends as far as and includes Bulatchi Nullah on the left bank of the River Indus and the village of Chungus on the right bank; (b) The Kajnag and Kafir-Kund including Mozi; (c) The Ladakh District including Changchenmo. (N. B.—The attention of sportsmen is called to Ladakh Rule 1 (c) which defines the Ladakh District. All sportsmen proceeding up the Shyok River beyond Hunder village require the Ladakh permits and certificate.) (i) Application for such rules and permits should be made by sportsmen in each case to the Secretary, Game Preservation Department. (ii) All routes leading into Astor from Baltistan are closed except under special permission, which may be obtained

in special cases only from the Political Agent, Gilgit. (iii) Sportsmen visiting Ladakh and Baltistan should apply for a *purwana* to obtain transport and supplies on these routes to the Secretary, Game Preservation Department. (iv) Up to the first of May, sportsmen will be given no official assistance in obtaining coolies to cross the Zojila and Burzil passes, but will have to make their own arrangements.

4. The driving of bears, leopards and pigs is permitted from March 15th to September 30th inclusive, and on the grounds open to sport in the hills between Verinag and Baramulla on the south side of the Vale of Kashmir, the driving of these animals is allowed from March 15th to November 15th inclusive. With the above exceptions driving game with men and dogs is prohibited.

5. Except in rare instances where, owing to excessive numbers, other arrangements become necessary, the destruction of females of *ovis hodgsoni* (the ammon of sportsmen), sharpu, burhel, markhor, ibex, Tibetan antelope, gazelle, khakur (barking deer), Kashmir deer and brown bear with this year's cubs, is forbidden.

6. (a) Shooting, killing and catching of yak is totally prohibited. (b) No musk deer, either male or female, may be killed, taken or caught except under Rule 14, License VI. or under the authority of a written order obtained from the Durbar through the Secretary, Game Preservation Department, and such permission shall

only be given in rare instances. (c) All shooting, killing and catching of ibex is forbidden in the Valley of Kashmir, i.e., the whole area which comprises the watershed of the River Jhelum and its tributaries above Baramulla. (d) The killing of the serow is prohibited between Chashma Shahi and Dachigam *Rakhs*. (e) The killing of markhor is prohibited in all nullahs flowing into the Indus above Rondu in Baltistan. With the exception of those laid down under Rule 12. (f) The killing of brown bears is prohibited in the Kajmag. (g) The killing of khakur (barking deer) is prohibited in all places for a period of three years from *Sambat* 1977. (h) The killing of herons is forbidden, except in such places as is necessary for the protection of young trout now being introduced, such places to be previously defined by the Secretary, Game Preservation Department. (i) Shooting in the undermentioned area is reserved for officials employed in Srinagar and residents whose business or work lies there :—

(1) The Akahal Nullah in Sindh Valley ; (2) The Dara Basin ; (3) The Khonmoo basin, i.e., the area north and east of a line drawn from Pandichuk village to Weean, but outside the limits of Khonmoo *Rakh* ; (4) The Brain and Nishat Bagh basins. From the Brain Nullah to the Dachigam *Rakh*. (5) The Pampur and adjoining Jhils of Kranchu Gum Sandahar and Maenboog.

N. B.—No shooting is allowed in these areas without a special permit which will be issued by the Secretary, Game Preservation Department. These permits

will be available for fixed dates only and must be shown to the watcher on duty when called for. In special cases only permits for these areas may be granted to visitors at the discretion of the Secretary, Game Preservation Department.

(a) The possession of unlicensed guns, firearms and ammunition is illegal as well as that of all nets, snares or other appliances for the express purpose of taking birds or wild animals except for men licensed to net in Kishtwar for the purpose of catching hawks, a license for which purpose will be obtained from the Tahsildar of Kishtwar. A trapping license for which Rs. 4 each trap will be charged will, in future, be levied from all persons (except the watchers of the Game Preservation Department and any other person specially detailed by the Secretary, Game Preservation Department), wishing to trap foxes, otters, jackals and stone martens (misser). With the above exception the skins of these animals are the property of the State, and no one is permitted to kill them unless in possession of one of the licenses laid down under Rule 15, or holding a written permit from the Secretary, Game Preservation Department. The sale or export for sale of the pods of musk deer, and of the horns or skins of the game animals mentioned in Rule 5, as well as of the skins of brown bears, is prohibited. The sale of the skins of black bears and leopards is allowed, if killed by license-holder or other authorized persons. Where any person is found in possession of any game or parts of game recently captured or killed, the Court may presume that he has captured or killed such game. The

breeding season of chikor, partridges and pheasants is considered to extend from March 1st to September 21st, both days inclusive; that of geese, ducks and teal from April 15th to September 15th; snipe from April 16th to August 31st both days inclusive and during the seasons thus defined no one shall destroy, net or capture in any fashion, any of these birds, nor shall any of their eggs be taken, nor shall any person sell any such birds during the breeding seasons. The shooting season of chikor, partridges and pheasants is considered to extend from September 22nd to the last day of February; that of wild fowl, such as geese, ducks and teal from September 16th to April 11th inclusive and snipe from September 1st to 31st March. No wild fowl or any of the game birds herein mentioned may be captured by nets, snares, or lines with hooks, by the method known as *kakko-putta*, or any similar device. (b) The shooting season of stags shall extend from September 15th to March 14th. The remainder of the year is close season. The following nullahs are closed until further orders as sanctuaries, and no shooting is permitted therein, nor is any grazing allowed:—

The Gumber Nullah in the Wardwan; Wasdoon and Lopara basins in the Duchan and Oodil ilaqas of Kistwar; Aijas Nullah in the Bandipur District; The Kushmul and Yimu basins in Baltistan; The Rajpuran and Bawa basins in the Deuso Nullah, Nowboog District; Soomjan and the Sapphire Mines Nullah in Kishtwar; Gabdoori and Kuwirawal in the Shamsibiri; Askor in the Rondu ilaqa.

[BALTISTAN.]

The following nullahs in Baltistan, viz., Alchori and Hoshopa, Nurh and Ghorul Turmik, Tsurī and Bragicha are now open for shooting under the following restrictions. Each nullah will be limited to one gun for the first period, i.e., April 15th to July 14th, and one gun for the second period, i.e., July 15th to October 15th. Special permits will be issued for these nullahs by the Secretary, Game Preservation Department, without which no one will be permitted to enter or shoot in them. Guns for the first period will be allotted by priority of application on arrival in Kashmir, for the second by application from any place. Each gun will be limited to two ibex and 2 markhor only in these nullahs. The State reserve to themselves the right to close any nullah, jhil or place at any time during the season for State purposes or on the representation of the Secretary, Game Preservation Department, that the nullahs, jhil or places in question have been too heavily shot, or for any other reason. The Secretary, Game Preservation Department, is further authorized under this rule to take immediate action, if he is satisfied that it is necessary reporting the step taken to the Durbar. Licenses to shoot large and small game, and without which no person is permitted to shoot or proceed in search of game, will be granted as follows :—

I. A license, for which Rs. 60 will be charged in force from March 15th to November 15th, permits the holder to shoot in the nullahs and districts which are

open for sport, the following number of animals only :—Markhor of any variety, in all 2 ; ibex (of which 2 only in Ladakh) 3 ; *ovis hodgsoni* (ammon) 2 ; *ovis vignei* (sharpu) 2 ; *ovis nakura* (burhel) 4 ; Tibetan antelope 3 ; Tibetan gazelle 1 ; Kashmir stag 2 ; serow 1 ; brown bear 2 ; tehr 4 ; goral 4. Also small game up to November 15th, and pigs, black bears and leopards, no limit. II. A license of the value of Rs. 20 will permit the holders to kill black bears, leopards and pigs from March 16th to November 15th inclusive. III. A winter for which Rs. 50 will be charged, in force from November 16th to March 14th, will permit the holder to kill small game as laid down under :—Markhor (any variety) 2 ; ibex 2 ; sharpu 2 ; burhel 3 ; Tibetan antelope 3 ; Tibetan gazelle 1 ; Kashmir stag 1 ; serow 1 ; tehr 3 ; brown bear 2 ; goral 3 ; and pigs, black bears, leopards, without limit.

IV. To meet the special circumstances of Baltistan, Ladakh, Astor and Gurais, a license, of the value of Rs. 10 in force between 16th November and 14th March, will entitle the holders to kill :—(a) In Baltistan and Lower Ladakh, i.e., below Khalsi on the Indus, ibex 2 ; sharpu 2. (b) In Upper Ladakh, i.e., above Khalsi on the Indus, burhel 2 ; sharpu 2. (N. B.—These Licenses (a) and (b) are issued subject to the conditions of Ladakh Rule No. 2 and do not permit the holder to shoot within the blocks closed under the rule.) (c) In Astor and Bunji, sharpu 4 ; (b) in Gurais Valley, ibex, 1 ; brown bear, 1 ; black bear 2 ; and small game as laid down under License V (a).

These licenses will be strictly limited in numbers and issued in special cases only by the Secretary, Game Preservation Department, on the personal recommendation of the Political Agent in Gilgit, the British Joint Commissioner or the Wazir Wazarat. No person can hold Licenses III and IV at the same time.

V. (a) A small game license, for which Rs. 30 will be charged, will enable the holder to shoot pheasants, chikor and partridges from September 22nd to the last day of February inclusive ; geese, ducks and teal from September 16th to April 14th inclusive, and snipe from September 1st to March 31st. This license does not entitle the holder to shoot within any forest or jungle inhabited by big game, nor to enter within the line of any boundary pillars or demarcation of the Forest Department or Game Preservation Department, nor to carry guns or ammunition other than those used for small game shooting. (b) A small game license, for which Rs. 20 will be charged, will enable the holder to shoot as provided under license (a) above but for a period of two months only to run from the date of issue of the license. (c) A small game license, for which Rs. 35 will be charged, will enable the holder to shoot as provided under license (a) above, and also to use punt and long guns for the purpose of killing wild fowl.

N. B.—Sportsmen holding any of these licenses may kill ram chikor between the dates of September 16th and May 1st, pigs on the left bank of the Jhelum above Srinagar and on both sides of the river below Srinagar, but outside a 5-mile limit of any of the State big game reserves, leopards including the ounce, wolves, foxes, martens and other vermin. Quail shooting is free to all. No sportsman may take out more than one each of Licenses I to V.

VI. A special license, for which Rs. 30 will be charged, and which may be repeated in the case of musk deer only, will enable the holder to kill one musk deer or if a holder of Rs. 60 No. I license, or the Rs. 50 No. III license to kill one specimen extra of any one of the animals laid down in the license in question, except markhor, ovis ammon and goa.

Any sportsman, however, who shall, through accident or carelessness, kill a greater number of any of the above animals than is permitted under the terms of his license, will be called upon to take out a No. VI Rs. 30 license for each animal so killed. The State reserve to themselves the right to refuse to issue any of the above licenses. *N. B.*—After a license has once been taken out and the licensee has left Srinagar, no exchange or refund can be permitted except in the following cases :—(1) A Rs. 20 No. II license may be exchanged for a Rs. 60 No. I license on payment of the difference, provided that the applicant has not previously been in search of, or shot any of the animals specially included under the No. I list; (2) A Rs. 30 No. V (a) license may be exchanged for either a Rs. 60 No. I or a Rs. 50 No. III on payment of the difference; (3) A Rs. 20 No. V (b) license may be exchanged for a Rs. 30 No. V (a) license on payment of the difference.

VII. No one shall take service as a regular shikari with sportsmen until he has been registered by the Secretary, Game Preservation Department, and granted a license. Employers of shikaris are advised to insist on the shikaris producing their

registration forms, as these show any adverse entries which have been made against them. (N. B.—The employment of local shikaris in their own districts is recommended. Any sportsman wishing to employ a villager or local man as shikari is requested to communicate his name to the Secretary for registration in order that he may become liable to the same penalties as the regular shikaris.)

VIII. The following dimensions in inches are laid down as a definition of shootable heads permitted to be killed under the terms of the Kashmir Game Laws :—

Markhor (of any variety), 45 ; ibex, 35 ; ovis ammon, 38 ; sharpu 24 ; burhel 23 ; Tibetan antelope, 22 ; Tibetan gazelle, 10 ; Kashmir stag (*barasingha*), 35 inches measured from behind along the outside curve.

N. B.—Shikaris will be held equally responsible with their employers that animals under the above dimensions are not intentionally shot. Records are kept up by the Secretary, Game Preservation Department, in the interest of sport, of all heads of exceptional size, killed in Kashmir. Sportsmen are earnestly invited to co-operate with the Secretary and to send him any such exceptional heads they may obtain for measurement and entry in the Kashmir Big Game Records.

IX. (a) The practice of palming off on sportsmen old heads or heads that have been killed by native shikaris, being largely on the increase, sportsmen are asked to be very careful about accepting heads as their own unless they have been gathered

by them, or can be absolutely verified, as the identical animals they may have wounded. In all cases the head and jaw-bone should be complete with the actual decaying flesh adhering to the bones, and sportsmen should insist that other bones, skin and feet should be produced with the head. Failing the above requirements the presumption is that the head is an old one and the case should be immediately reported to the Secretary, Game Preservation Department. Any attempt by a shikari to palm off such a head shall be considered to be a breach of rule punishable under Section 18. In no case should rewards or money be given to shikaris or villagers for heads brought in by them. The purchase of heads is a direct incentive to the encouragement of poaching and the killing of animals by natives for sale to sportsmen.

(b) The attention of sportsmen is called to Visitors' Rule 26. Sportsmen are requested on no account to leave their rifles with their shikaris on quitting a nullah, nor to make presents of firearms or ammunition to natives of the country. No shikari is permitted to possess any rifle for which he has not taken out a license, and every shikari is warned that if he is found in possession of an employer's rifle, after the employer has left the shooting ground, he will be dealt with under Rule 18.

(c) The practice of giving rifles to shikaris for the purpose of following wounded animals, or of offering rewards for the same to local men or others, is not

permitted as it is a direct incentive to poaching and killing animals which cannot be rightly claimed by sportsmen as their own.

The following scale of rewards will be paid by the Secretary, Game Preservation Department for all vermin killed by license-holders and watchers employed under the Game Preservation Department, and by any others specially authorized to kill vermin :—

				Rs.	A.
Leopard (snow and common)	..	..	..	10	0
Ditto (Cubs do. do. )	..	..	..	5	0
(Skin to remain the property of the killer, if a license-holder.)					
Wolves, Wild Dogs, Lynx, etc., etc.	..	..	..	10	0
Carion Crow and Cormorant	..	..	..	0	4
Wild Cat, Weasels, Pine Martens	..	..	..	0	4

The reward of Rs. 5 under 2 above may be paid at the discretion of the Secretary for Otters and other wild animals in rivers and places where they are doing damage.

In all cases the reward will be paid on the skins being brought or sent before being tanned to the Secretary, Game Preservation Department, by the killer. They will then be stamped under his authority and returned to the owner if a license-holder. In other cases they will be retained and sold by the Department for the benefit of the killer, or in the case of non-license-holders for the benefit of the Game

Preservation Department. Applications for traps should be made to the Secretary, and will be supplied if possible. A small deposit fee of the value of traps will be charged which will be given back on the return of the traps in good condition. Skins brought in by the Srinagar skin merchants will not be recognised for rewards. Several cases having occurred of the accidental killing of cows and cattle by sportsmen, when shooting in the vicinity of native villages, it is particularly requested that special care may be taken to avoid any possibility of similar cases in future. License-holders who, by the conditions of the license, are enjoined not to kill more than a special number of animals, are requested, on the expiry of the period of the license, to return the same to the Secretary, Kashmir State Game Preservation Department, with the statement showing the number of animals killed by them, filled in and signed. Sportsmen are particularly requested not to give presents to the Game Preservation Department servants, and to report any irregularities on their part to the Secretary, Game Preservation Department. Game Preservation Department servants receiving presents from sportsmen will be dismissed. Sportsmen are warned that they must report to the Secretary, Game Preservation Department, all cases of serious injuries received by shikaris, beaters and other State subjects (with full description and address) whilst employed in beating, etc., in their service, together with full report on the circumstances of the occurrence, and of any compensation or money reward paid by them to the injured person or his relatives. Any disregard of this rule may be dealt with

by the refusal of a shooting license on any future occasion. His Highness the Maharaja may, in writing, relax any or all of the Rules in favour of any individual.

NOTE.—Applications for licenses may be made to Cockburn's Agency, Kashmir General Agency, Motmid Durbar (Officer-in-Charge, European Visitors), Messrs. Sammad Shah, or to the Secretary to whom all other communications should be addressed, either personally or by letter, to care of Postmaster, Srinagar. Letters of routine, such as applications for licenses, permits, etc., which can be dealt with in the Office, Game Preservation Department, and do not require the personal attention of the Secretary should be addressed to—

THE OFFICE,

GAME PRESERVATION DEPARTMENT,

SRINAGAR.

LADAKH SHOOTING RULES.

1. All sportsmen shooting in Ladakh are required to have in their possession the Ladakh Permit laid down under Game Laws Notification, Rule 2, and Visitors'

Rules Nos. 115 (2) (a) and 116. These will be issued by the Secretary, Game Preservation Department, on their signing a certificate to the effect that they have no intention of crossing the Frontier either into Chinese Turkistan or Tibet. For the purpose of these Rules the Ladakh District will be held to commence :—(a) At Bot Kharbu ; (b) At the Chorbat Pass ; (c) At the village of Hundar on the Shyok river.

N. B.—The above rule applies to sportsmen only. Should they wish to be accompanied by their wives or other persons who have not a shooting permit ; application for special permit must be made to the British Joint Commissioner through the Game Preservation Department.

2. The Ladakh season is divided into two parts :—15th April to 14th July ; 15th July to 15th October. No shooting is permitted in either the ammon or sharpu blocks except during the above periods. Passes for the first period will be issued by priority of application on arrival in Kashmir territory. Passes for the second period by priority of application from any place on or after January 1st in each year. Applications for passes should be sent to the Secretary, Kashmir State Game Preservation Department. Sportsmen who have registered their names for the second period, who are unable to avail themselves of the permits, are requested to inform the Secretary immediately so that the blocks may be allotted to other guns.

3. In the shooting season (according to the latest rules) the number of guns allowed to shoot *ovis hodgsoni* (ammon) will be 8 in each period, and sharpu 10 in

each period. Of these 3 only in each period will be permitted to shoot in the Changchenmo District. Fixed blocks will be allotted to each sportsman by priority of application. Each sportsman will be allotted 1 ammon block and also 1 sharpu block. Those permitted to shoot in the Changchenmo District may be granted an ammon block in addition to the Changchenmo ground. (N. B.—The Secretary, Game Preservation Department, reserves to himself the right to allot the ammon block in the Changchenmo District to one of the guns holding Changchenmo permit in each period.) The remaining sharpu blocks will be available for other sportsmen by priority of application, *vide* Rule 2. No sportsman may shoot any species of game in a block allotted to another gun. All the rest of the country not included in the blocks, except the Changchenmo, may be shot over by any sportsman holding a Ladakh permit. In addition to this Block No. 12, the Stock nullah (not Shang) is available for holders of the Rs. 10 special winter license for Ladakh. The following blocks have been provisionally made in the Ladakh District :—

Ovis Ammon.

The tributaries of the Indus from Dumchok to Koyul; the watershed of the Koyul river as far as its junction with the Indus. Below this all tributaries of the Indus as far as the big bend of the river at Dungti; the Hanle river basin as far as south of Hanle monastery; the Hanle river basin south of (3); the tributaries

of the Indus between the Hanle river and the Puga river ; the basin of the Tsomoriri lakes with the exception of the Phirsi nullah ; The country lying between 3 and 4 on the east, 5 on the north, and 6 on the west ; The Phirsi and Kharnak nullahs ; the basin of the Salt lake and the tributaries of the Indus between (and including) the Puga river as far as the Tiri Foo ; the Tiri Foo and the country lying to the north bounded by the Indus on the north and east, the Leh-Kulu Road on the west, and the watershed of Tsokri Chamo plain on the south ; the triangular area lying between Chooshal on the north, the Frontier on the east, the watershed of the Chooshal river and Chamatnang-Foo on the west and the Indus on the south from Chamatnang to Dungti ; the Changchenmo.

Sharpu.

The Igu and Chimre nullahs ; Nang and Sabu ; Phyang and Tara ; Umla and Nimo ; Bazgo and Myel ; Likir and Suspul and Walch-Drokpa ; Hemis-Shupka, Nurla and Khalsi ; Damkar to Hanu ; Hemiskot and Wanla ; Ilchi and Lardo ; Rumpakh ; Stok and Shang ; Masho.

Of the above blocks the following were available for shooting at the time of the issue of the latest rules :—

Ovis ammon.—Blocks 1 and 2, 5, 7, 8, 10, 11 and 12.

Sharpu.—Blocks 1 and 2, 3, 5, 6, 8, 9, 10, 11 and 12.

The killing of sharpu is forbidden on the maidan lying to the north and south of the Treaty Road between Likir nullahs and Bazgo. Sportsmen obtaining permission to shoot in Changehenmo should apply for a special *parwana* from the British Joint Commissioner, Ladakh, without which no transport will be obtainable to cross the Marsemikla. Sportsmen are warned that they are expressly forbidden to cross the Frontier of Chinese Turkistan or Tibet without special permission from the Government of India. The Frontier villagers are strictly forbidden to provide transport beyond the limits of Kashmir territory, unless the employer has a special permit. The Kashmir State Game Preservation Department Rules will apply in all respects to sportsmen shooting in the Ladakh Shooting District. The names of all sportsmen obtaining permission to shoot in the Ladakh Shooting District will be notified by the Secretary, Game Preservation Department, to the British Joint Commissioner, Leh.

KAJNAG AND KAFIR KUND.

The following rules are to be observed by those to whom permission may be given to shoot in the Kajnag and Kafir Kund :—

The Kajnag and Kafir Kund is considered to be the range to mountains and all off-shoots therefrom, from Baramulla to Domel, the watershed of which flows into

the area drained by the rivers Pohru, Jhelum, Ginger (or Karnah) and Kishenganga. The shooting season for markhor in the Kajnag and Kafir Kund, will be held to extend from 15th April to 14th July and 15th July to 15th October. The close season for the remainder of the year. Six guns only will be permitted during each period: each of the six guns in each period will be allotted to a particular nullah in accordance with priority of application, and this nullah only must be shot in for markhor. The six nullahs which will be open for shooting in 1921 will be: (1) The Gretnar and Bhimiar branches. (2) Goojur. (3) Maidan. (4) Islamabad. (5) The Domel and Ruperday beat in Kathai. (6) The left hand beat in Mozi, comprising Hinterbagh, and all ground below this on the left bank of the river. (N. B.--Sportsmen will be permitted to march to and occupy their nullahs on or after the 10th of April and 10th July, respectively, on the understanding that they do not commence to shoot before the 15th of each month.) Passes will only be granted for the first period on arrival of the applicants in Kashmir. Applications for the second period may be made in advance, and will be considered in order of their receipt. Applications for passes should be made to Secretary, Kashmir State Game Preservation Department. A limited number of sportsmen holding the winter licenses will be permitted to shoot big game (other than markhor and red bear), as well as small game, in the Kajnag and Kafir Kund from November 15th to March 14th. Applications for a special permit for this purpose should be made to the Secretary as above. The Shemshibiri range is subject to the ordinary Game

Preservation Department Regulations and remains open. The attention of sportsmen is called to Kashmir State Game Laws Notifications, 1921-22, defining the size of shootable heads. No grazing or collection of *kuth* root, wood, etc., nor introduction of dogs is permitted in Kajnag and Kafir Kund or in the Shemshibiri and Salkala ranges above the boundary pillars demarcated in 1903 and 1907, respectively. The shooting of red bears is temporarily closed in the Kajnag and Kafir Kund districts.

RULES FOR ASTOR SHOOTING DISTRICT.

The following Rules (1922-23—Sanibat 1979) are for observance by those to whom permission may be given to shoot in the Astor Shooting District of the Gilgit Agency :—

The Astor Shooting District, for the purpose of these rules, is considered to be the catchment areas of the streams flowing from the Kamri and Burzil Passes in the direction of Kashmir to their junction above Astor. Beyond this the catchment areas of the streams flow into the Astor River on both banks till its junction with the Indus at Ramghat. All nullahs running into the Indus below Ramghat are closed

and no persons are permitted to travel or shoot below this point, which is held to be the boundary of Chilas territory. Above Ramghat the nullahs on the left bank of the River Indus as far as the junction of the Gilgit river, and above this, the whole of the country on both banks of the Indus which is now included in the Bunji Niabat as far as the village of Bulatchi (including the Bulatchi Nullah) on the left bank of the river, and the camping ground as Shangus on the right bank. (2) Sportsmen, in view of the serious political objections against their entering Chilas, are warned that they must in no case cross, or even approach, the watershed in the direction of, or trespass in, Chilas territory. If any inconvenience arises through disobedience of these orders, the whole area now thrown open will be closed absolutely. (3) Mir Malik is reserved for the use of the Garrison at Rattu Camp under the Gilgit Agency Shooting Rules. (4) In consequence of these rules, the routes leading into the Astor District from Foalwein and Kheyl (or Kel) through Mir Malik remain closed. (5) Sportsmen must bring with them the whole of their coolie and pony transport from Kashmir, as none will be available in the Astor Shooting District. If, through any unforeseen cause, necessity should arise for extra coolies or ponies, application should be made, stating the special circumstances of the case, to the Political Agent, Gilgit, who will ask the Durbar authorities to make necessary arrangements. The Durbar officials are forbidden to receive or act on application from sportsmen for pony or other transport. (6) All sportsmen permitted to shoot in the Astor-Bunji Nullahs must sign a certificate to the effect that they agree to take with them all necessary transport

and supplies, for themselves and their followers, for the period they are in the Astor Districts, as neither can be found in the Gilgit Agency; also that they understand that there is a prohibition against ladies accompanying them beyond the Kamri and Burzil Passes. No demands by sportsmen on stores belonging to the Supply and Transport Department can be met. Every effort will be made by the Political and Civil authorities to furnish supplies, but delivery cannot be guaranteed. The Bazaar shops at Astor and Bunji will furnish supplies for followers, and meat, as far as they are available, at the fixed local rates, but sportsmen are warned that the quantity of such supplies is extremely limited and they are advised therefore not to count on obtaining such supplies of any kind. If they are available, and the villagers are willing to sell, sportsmen are requested to see that payments are made in their own presence to the actual vendors. (7) The local civil authorities are authorized to call upon all persons travelling in the district to produce their permits. (8) After entering the Astor Shooting District, as above defined, European sportsmen will be subject to the same rules and regulations as hold good in other parts of the State except that the Political Agent in Gilgit shall exercise the powers which, in other parts of the State, are vested in the Resident in Kashmir. The Kashmir State Game Preservation Department Shooting Rules will apply in all respects to sportsmen shooting in the Astor Shooting District (except as in Clause 10). (10) The nullahs draining into the Astor river are closed to Gilgit sportsmen for the shooting of markhor. In the remaining Bunji and Haramosh Nullahs, Gilgit sportsmen

may shoot between the 15th October and the 15th April: 1 markhor and 1 ibex each as well as oorial, provided that a fine of Rs. 20 payable to the Secretary, Game Preservation Department, Kashmir, shall be levied for any markhor or ibex so shot measuring less than 50 inches and 45 inches respectively.

Members of the Gilgit garrison will be subject to the special rules as approved of by the Durbar as heretofore regarding licenses, heads, etc., but should they desire to shoot in Kashmir or in the Astor Shooting District they will be permitted to do so on payment of Rs. 30 from the Gilgit Game Fund to the Kashmir State Game Preservation Department, and in a similar manner in the case of any sportsman holding the Kashmir Big Game license to whom the permission may be granted to travel or shoot in the Gilgit Agency outside the limits of the Astor District, half the amount of the above license, viz., Rs. 30 will be paid by the Game Preservation Department to the Gilgit Agency Big Game Fund. In the case of members of the Gilgit garrison wishing to shoot big game (other than markhor) in any of the nullahs running into the Astor river, they may do so on taking out a special license of the value of Rs. 30 from the Secretary, Game Preservation Department, which shall entitle the holder to shoot 2 ibex and 6 sharpu (of either sex) as well as leopard and red bear. (*N. B.*—This rule does not apply to the Mir Malik Nullah in the Astor District which is reserved for the use of the Rattu garrison.) (11) The names of all sportsmen obtaining permission to shoot in the Astor Shooting District will be notified by the Secretary, Game Preservation Department, or

Honorary Assistant Secretary, Supply and Transport Corps, to the Political Agent, Gilgit, and also the Waazir Wazarat, Gilgit. (12) No Kashmiri shikari, except those approved of by the Secretary or Honorary Assistant Secretary, and sanctioned by the Political Agent in Gilgit, etc., will be permitted to enter the Astor Shooting District. Particulars as to local shikaris can be obtained on application to the Tahsildars at Guraish and Astor and Naib Tahsildar at Bunji.

The Astor shooting season is divided into two parts:—15th April to 14th July; 15th July to 15th October. Permits for the first period will be granted by priority of application on arrival in Kashmir. Applications for the second period may be made in advance any time on or after January 1st, and will be granted in the order of their receipt. Applications for permits should be sent to the Secretary, Game Preservation Department, Srinagar, or to the Honorary Assistant Secretary, Supply and Transport Corps. The latter's address will be Srinagar between 1st of October and 10th of June, Bandipur during the remainder of the year. Ten guns will be allowed during each period of which six only will be permitted to shoot markhor. Each of the six guns will be allotted a particular nullah, in accordance with priority of application, and this nullah only must be shot in for markhor. The six nullahs open for shooting as above (according to the latest rules) are (1) Khaltar, (2) Dashkut, (3) Mushkin, (4) Abadibur, (5) Bunji, and (6) Bulatchi. All other nullahs on the right bank of the Astor river below Astor, as far as Bunji, and all other nullahs which flow into the Indus, above Bunji and

which are in the Bunji Tehsil (as laid down in Rule 1) will be closed. The nullahs flowing into the Kamri river, except Mir Malik, and those on the left bank of the Astor river below Astor, and on both banks of the river above Astor, will be available for any of the ten guns holding Astor permits for the shooting of ibex, sharpu and red bear.

The shooting season of small game in the Astor District will extend from September 1st to the last day of February. Remainder of the year close season. Sportsmen are warned that the employment of coolies to cross the Burzil Pass cannot be insisted on during the months of March and April and is entirely voluntary. If coolies are willing to take service and volunteer for the work, the same charges will be fixed as have been laid down in similar cases in Kashmir, viz., 10^{rs} annas a march, and these rates will extend from Minimurg to Chilum Chowki. Further, the arrangements, for the crossings of the Burzil Pass, should be left to the coolies themselves who, being local men, are acquainted with the difficulties of the road and the climatic conditions that have to be met. The date of the permit issued to sportsmen will be the date on which they are permitted to leave Bandipur to cross the Burzil Pass, and will be strictly enforced. Sportsmen or travellers will start at intervals of not less than two days' interim, and under no circumstances will they be allowed to lessen the interval, or pass each other on the road. Sportsmen are requested to carry out the spirit and letter of this rule, any infringement of which will result in the curtailment of shooting during the first period.

JAMMU AND KASHMIR FISHING REGULATIONS.

An abstract of the Jammu and Kashmir Fisheries Regulation of *Sambat* 1960, and of the Notification issued thereunder as amended to *Sambat* 1979 states :—

“His Highness the Maharaja Sahib Bahadur is pleased to notify that the aforesaid Regulations and Notifications issued thereunder shall extend to the following areas :—(1) The whole of the Kashmir Province; and (2) The Poonch river (including the pool of Tangrot) together with all its tributaries in the Jammu Province.

“1. ‘Waters’ mean and include all rivers, streams and lakes, all ponds belonging to the State, and all tanks constructed by or under authority of the State. ‘Trout Waters’ are all those waters in the State which have been, or are now being, stocked with brown or rainbow trout. No fishing is allowed in these waters without a special license as well as a permit showing the water and period for which the license is issued for the purpose, under these Regulations. ‘Reserve Waters’ mean and include waters where fishing shall not be permitted, except under special license issued in that behalf, nor shall the capture of fish be allowed by means of other than rod and line, or casting net which shall not exceed 20 feet in diameter, with meshes not smaller than one-and-a-half inch from knot to knot. (N. B.—The ordinary landing net and bait net used by fishermen is permitted to be used,

provided that the owner holds a license for rod-fishing as laid down under Notification 8). 'Sanctuaries' mean and include waters where fishing, because of the sacred nature of the place or otherwise, shall not be permitted under any circumstances. 'Protected Waters' mean and include waters where fishing shall not be permitted, except under a license issued in that behalf in the manner indicated hereafter, nor shall the capture of fish be allowed, except by one or other of the recognised modes of fishing. 'Fixed Engine' means and includes any net (other than those referred to in the clause above and the note thereto, relating to the 'Reserved Waters') and any cage, trap, sluice or other contrivance for taking fish fixed in the soil or made stationary, in any other way. (N. B.—The erection of dams for the working of mills, etc., is permitted ; but in all cases a free channel must be left open for the passage of fish up and down the river. The channel should, if possible, be half the river, but rights of mill owners should be protected so that a sufficiency of water is guaranteed for their mills. The construction of the dam to form a sluice for the capture of fish is illegal as forming a 'Fixed Engine' under the above class.

" 2. (A) The following waters on the Poonch river from Kotli to Tangrote, including the junction pool and the Chukkar on the Jamun bank of the Jhelum at Tangrote, shall be deemed to be 'Reserved Waters' the fee for fishing in which shall be: (i) for a license for 10 days for fishing with rod and line, Rs. 10; (ii) for a license for one day for fishing as above, Rs. 2; (iii) for a license for one year

(commencing January 1st) for fishing with rod and line, Rs. 20 ; (iv) for a license for one year (commencing January 1st) for fishing with casting net of the dimensions and description laid down above, Rs. 20 ; and (B) the following waters shall be deemed to be "Reserved Waters," the fee for fishing in which shall be : (a) For a license for one year commencing 1st *Baisakh*, Rs. 15 ; (1) The Jhelum at Ningle as defined under Notification 4 (f) and the following, "Trout Waters," under the conditions of Notification 8 (13) ; (2) The Veshau from its source to the bridge at Kaimoo, with the exception of the Istihal and Tahsil branches ; (3) The Ahane water at Sambal ; (4) The Kishanganga river at Gurais. (*N. B.*—This does not include the Burdwan branch.) (5) The Achhabal river below the sign-post at the potter's huts below the Nunwein village ; (6) The Arput above its junction with the Achhabal river.

(b) For a license for the season (*viz.*, from 1st *Baisakh* to end of *Chet*) for fishing with rod and line save in the Poonch river, *vide* Notification 4, and as laid down under (A) *supra*, Rs. 5 ; (c) For a license for the season (as above defined) for fishing with a casting net (of the dimensions and description) laid down under Notification 8, and within the same limits as in (b) above, Rs. 16-8. 1. The Liddar from Bahatkote bridge to the junction with the Jhelum ; 2. The Sindh, from Kangan to 3 miles below Gandarbal bridge and again from 1 mile above Utkhurro village to the junction with the Jhelum ; 3. The Pohroo with its two branches, the Lolab and Kamil streams ; 4. The Vishau from 1 mile below the *Tahsil* at Koolgam to its

junction with the Jhelum; 5. The Kishanganga at Gurais from the Dāk Bungalow to Kanzalwan; 6. The Ahan water at Sambal. (*N. B.*—Except the portion of the above waters which are specially defined as “Trout Waters”.) 7. The Nala Madmati below the bridge at Kaloosa. 8. The following waters on the Jhelum;—
 (a) The Dalgate Pool and the channel from Dalgate to Gagribal; (b) Shadipur, from the junction of the Sindh to half a mile below Shadipur; (c) Sambal; (d) Baranulla and (e) Sopore from the bridge to half a mile below; (f) Ningle from the Woolar to the boundary pillar; and (g) all the tributaries of the above from the junction with the main stream to 3 miles up stream as far as the boundary pillars. (*N. B.*—All places on the above rivers that are defined as “Sanctuaries” are closed as well as those laid down “for rod-fishing only”.)

(C) The following places on the above waters are reserved for rod-fishing only, from April 15th to September 15th, subject to the close seasons laid down under 5 B (d) *infra*: (1) The Sindh river at Gandarbal from half a mile below the old bridge to half a mile above Chinars on the left bank at the village of Mulpura, and including the Island Pool; also from 100 yards above Utkhurro village to the Chinar tree, 300 yards below the village; all fishing is strictly prohibited at Gandarbal within the limits of His Highness’ camping ground; (2) the Dalgate Pool, the Canal Gate Pool just above the Library, and the pool at Radshahi Bagh; (3) Sportsmen holding Rs. 5 license for reserved waters wishing to fish in the Dalgate and Canal Gate Pool which lie within Municipal limits may be called upon to pay the extra

license fees Rs. 2, laid down by the Municipality for fishing within Municipal waters ;
 (4) The bridges at Baramulla, Sopore, Sambal (with exception of the limits of the Sacred Temple of Nand Kaeshar "Bharin") and Bijbehara from 100 yards up stream to half a mile below the bridge, and the Jhelum at Ningle from the mouth of the Woolar Lake to the boundary pillars. (N. B.—Under the revisions of Notification 3, the fishing is prohibited at Shadipur within 100 yards of the Sacred Tree.)
 (5) The Veshau with its branches from its source to the bridge at Kainoo excluding those portions defined as "Trout Waters."

3. The following waters shall be deemed to be 'Protected Waters,' the fee for fishing in which shall be :—(a) For a license for one year (commencing on 1st *Baisakh*) for fishing with rod and line only, Rs. 2 ; (b) for a license for one year (commencing on 1st *Baisakh*) for fishing with Walruz (limited to 500 yards), Narchoo and Tokri-Jal as defined under Notification 8 *infra*, Rs. 6-8 ; (c) for a license for one year (commencing on 1st *Baisakh*) for fishing by net which includes (a) and (b) *supra* and also the Khuri-Jal, the Thorang-Jal, Khukshah-Jal, Kishup-Khuri-Jal and Bislai as defined under Notification 8 *infra*, Rs. 11. (N. B.—The above Licenses do not entitle the holder to fish within Municipal limits without payment of the License fees laid down for fishing in the waters) :—

(1) The Nala Bringhi in Tahsil Anantnag, Kashmir Province, below the bridge at Aragam.

- (2) The Dal Lake in Srinagar Tahsil.
- (3) The Anchar and Manisbal Lakes in Srinagar Tahsil, Kashmir Province
- (4) The Nala Shala Boog Lake in " " " "
- (5) The Nala Makhama in Sri Pratap Singhpora " " "
- (6) The Khushipura Lake in " " " "
- (7) The Nala Arwani in Koolgam " " "
- (8) The Nala Talar in Uttarmachipura " " "
- (9) The Nala Haihama in " " "
- (10) The Wahgam Kuhl in " " " "
- (11) The Woolar Lake in " " " "
- (12) The Nala Anderkot in " " " "
- (13) The Nala Naidkhai in " " " "
- (14) The Doorak Kalan in Srinagar " " "
- (15) The Watlab Ghat in " " " "
- (16) The Dar Numbal Ghat in " " " "

- (17) The Makdam Yari in Srinagar Tahsil, Kashmir Province.
- (18) The Khad Lab in " " " "
- (19) The Nala Sir in " " " "
- (20) The Nala Bunvari in " " " "
- (21) The Nala Kanihama from Batpura to Kausa in Uttarmachipura Tahsil,
Kashmir Province.
- (22) The Buda Marg in Uttarmachipura Tahsil, Kashmir Province.
- (23) The Chaku Dab in " " " "
- (24) The Sugand Nara Knuh in " " " "
- (25) The Tahas in Awantipura " " "
- (26) The Khawaja Bagh in Baramulla " " "
- (27) The Hajin in " " " "
- (28) The Nala Sundran in Anantnag " " "
- (29) The Nala With-Watroo in " " " "
- (30) The Verinag Stream in " " " "

- (31) The Jhelum river from Khanabal to Domel in Kashmir, except the portions which have been declared as "Sanctuaries," "Trout" or "Reserved Waters"; the nalas Ranghar and Bahan in Tahsil Kotli above the boundary pillars; Triklabal Ferozpura, below the village of Magham; the Rembiara; the Ramshi in Avantipur; the Tral Stream or Chandarhar; the nala in Maindri in Baramulla; and
- (32) All the tributaries of the above from the junction with the main stream to 3 miles up stream.

(N. B.—All places on the above rivers that are defined as "Sanctuaries," "Trout Waters" and "Reserved Waters" are closed to holders of this license.)

4. (A) No fishing shall be allowed in any of the "Reserved Waters" between the hours 7 p.m. and 5 a.m. from October 15th to April 15th, nor shall any fishing by net be permitted at any season in the above waters from sunset to sunrise except in such portions of these rivers as shall be specially exempted from the rule. (B) Fishing on the Poonch river in the pools of (1) Jangoo, 2) Palak, (3) Potah, (4) Lower Arno, and (5) the junction pool at Tangrot as well as (6) in all tributaries of the above which are defined in these Regulations as "Reserved Waters" is prohibited during the periods and in the manner noted below:—

(a) All fishing by net from November 15th to July 15th, except in Jangoo pool, where the prohibition will be from October 15th to July 15th; (b) "Waters"

are the chief spawning beds of the Poonch river, no fishing by rod or net shall be all well in the portions so defined from March 15th to June 15th. (*N. B.*—Visitors and sportsmen wishing to proceed from Tangrot into State territory can obtain transport from Mirpur on application being made to the Tahsildar, provided a clear 48 hours' notice is given.) In no case will transport be supplied at Tangrot, from Mirpur for use in British India; (c) whereas the "Reserved Waters" on the Sind river, (*viz.*, Paragraph 2, Clause 3, from Kangan to 3 miles below Gandarbal Bridge) is one of the chief spawning beds of Kashmir, no fishing by rod or net will be permitted in this water from May 1st to June 15th; and (*d*) that no fishing by net shall be permitted in the rivers defined as "Reserved Waters" under Notification 4, or within the boundary pillars which demarcate the mouth of these rivers from May 1st to June 30th.

5. A license for fishing in "Reserved Waters" can be obtained from the Secretary, Game Preservation Department Srinagar, Agencies issuing licenses, Motmid Darbar, and all the principal river-side Post Offices. The license will carry with it the privilege of fishing in "Protected Waters." A license thus granted will run for a period of one year commencing from the beginning of the *Sambat* year, except at Tangrot where the license shall run from January 1st. A license for fishing in "Protected Waters" can be obtained from the Secretary, Game Preservation Department, or the local Tahsildars. The license shall entitle the holder to fish in "Protected Waters" only; it will run for a period of one year from beginning

of *Sambat* year. A license granted under these rules shall be of general application in respect of all the "Protected Waters" in the State. A license granted under these rules for the "Reserved Waters" shall be of general application and shall entitle the holder to fish in all the waters in the Jammu and Kashmir State except in those for which, under Notification 8, a special license is necessary.

The above licenses shall be in duplicate, one copy of which will be given to the licensee and the other filed in the issuing office for reference. Any license-holders in possession of a license for "Protected Waters" who shall wish to exchange the same for Rs. 16-8 license for "Reserved Waters" shall be permitted to do so on payment of the difference between Rs. 16-8 and the amount already paid, on application being made to the Secretary, Game Preservation Department.

Notification 4.

Under the provision of Section 5 (i) of the Jammu and Kashmir Fisheries Regulation of *Sambat* 1960, the following waters shall, for the purpose of the said Regulation, be deemed to be "Reserved Waters" as defined in Section 4 —

1. The Poonch river from Kotli to, and including, the Junction pool and the Chukker on the Jammu bank of the Jhelum at Tangrot; 2. The waters of the Upper Jhelum Canal which lie in Jammu and Kashmir territory under the following

conditions :—(a) No interference is in any way to be made with the efficient working of the canal ; (b) Licensees will be required to produce their licenses for inspection on demand by any canal official. 3. The Lidder from Bhatkote bridge to the junction with the Jhelum ; 4. The Sindh from Kangan to 3 miles below Gandarbal bridge and again from 4 miles above Utkhurro village to the junction with the Jhelum ; 5. The Pohroo, with its two branches, the Lolab and Kamil streams ; 6. The Veshau from 1 mile below the Tahsil at Koolgam to its junction with the Jhelum ; 7. The Kishenganga at Gurez, from the Dāk Bungalow to Kanzalwan ; 8. The Ahan water at Sambal ; 9. The Achhabal and Arput rivers below the bridge at Ashashpura ; 10. The Madmati river below the bridge of Kaleosa ; 11. The Ferozpur stream above the village of Magham ; 12. The Dara stream ; 13. The Sinthon river ; 14. The Arrah river below the bridge at Telbal.

(N. B.—Except those portions of the above waters 1 to 7, which are now defined as “Trout Waters.”)

15. The following waters in the Jhelum river :—(a) Dalgate pool, and the channel from Dalgate to Gagribal, see also Rule 2 (c) 3 ; (b) At Shadipur from the junction of the Sind and Jhelum to half a mile below Shadipur ; (c) At Sambal from the bridge to half a mile below ; (d) At Baramulla from the bridge to half a mile below ; (e) At Sopore from the bridge to half a mile below ; (f) The Nala Ningle from Woolar Lake to the boundary pillar ; and (g) All tributaries of the

above from the junction with main stream to three miles up stream as far as boundary pillars.

(N. B.—All places on the above rivers that are described in Notification 3 as “Sanctuaries” are closed as well as those laid down for “Rod Fishing” only under conditions of Section 5 (3) of the Jammu and Kashmir Fisheries Regulations of *Sambat* 1960.)

Notification 8.

Under the provision of Section 16 of the Jammu and Kashmir Fisheries, His Highness the Maharaja is pleased to make the following rules:—

1. The following officers are authorized to receive applications for fishing licenses:—(a) In the case of “Trout Waters” the Secretary, Game Preservation Department, Srinagar, or in the absence, Frank Mitchell, Esq., Honorary Director, Trout Culture, Harwan, care of Post Office, Srinagar; (b) in respect of “Reserved Waters” the Secretary, Kashmir State Game Preservation Department, Srinagar; the Agencies, issuing licenses (Messrs. Samad Shah, Srinagar; Messrs. Cockburn’s Agency, Srinagar, and Kashmir General Agency, Srinagar); the Motamid Durbar, Srinagar, and the Postmaster at:—1. Tangrot; 2. Kotli; 3. Baramula; 4. Sopore; 5. Shadipur; 6. Srinagar; 7. Islamabad; 8. Bijbihara; 9. Gulmarg; 10. Malshahi Bag; 11. Guraiz; 12. Pahlgam; 13. Mangla. (c) In respect of “Protected Waters” the Secretary, Game Preservation Department,

Srinagar, and the Tahsildar of the Tahsil within the local limits of which lies any of the waters for fishing in which a license is desired.

2. Every application for a license shall be accompanied by the deposit of fee on the following scale :—

“ Trout Waters.”

(a) For a license for the fishing season (viz., from April 1st to 30th September), Rs. 100. (N. B.—Such a license entitles the holder to fish in all the “ Reserved Waters ” and “ Protected Waters,” mentioned in Notification 4 and 5.) (b) For a license for one week, Rs. 20. (c) For a license for one day, Rs. 5.

“ Reserved Waters.”

(a) For a license for one year commencing 1st *Baisakh*, Rs. 15 :—

1. The Jhelum at Ningle as defined under Notification 4 (f), and the following “ Trout Waters ” under the conditions of Notification 8 (13) :—

(2) The Veshau from its source to the bridge at Kaimoo, with the exception of the Istihal and Tahsil branches ; (3) The Ahan Water at Sambal ; (4) The Kishenganga at Gurais. (This does not include the Burdwan branches.) (5) The Achhabal river below the sign-post at the potter's huts below Nonwein village ;

(6) The Arput above its junction with the Achhabal river; (7) Madmati below the bridge at Kalosa.

(b) For a license for the season (viz., from first *Baisakh* to the end of *Chet* for fishing with rod and line, save in the Poonch river, *vide* Notification 4 and as laid down under (a), Rs. 5. (c) For a license for a season (as above defined) for fishing with casting net of the dimension and description set forth in Section 15 within the same limits as in (b) above, Rs. 16-8. (d) For a license for 10 days for fishing with rod and line in the Poonch river as defined in Notification 4, Rs. 10. (e) For a license for one year (commencing January 1st) for fishing with rod and line in the Poonch river as above defined, Rs. 20. (f) For a license for one year (commencing January 1st) for fishing with casting net of the dimensions and description set forth in Section 15 in the Poonch river as above defined, Rs. 20.

A license under (c) or (f) above includes the right to fish with rod and line.

"Protected Waters."

(a) For a license for one year (commencing on 1st *Baisakh*) for fishing with rod and line only, Rs. 2. (b) For a license for one year (commencing on 1st *Baisakh*) for fishing by the Walruz (limited to 500 yards), Narchoo and Tokri-Jal methods only, Rs. 6-8. (c) For a license for one year (commencing on 1st *Baisakh*) for fishing with net or by any of the recognized modes of fishing, Rs. 11.

3. A license under (c) above entitles the holder to fish with rod and line as well. On receipt of an application accompanied by the prescribed fee the officer authorized under Section (i) of this Notification shall grant the applicant a license in one or other of the forms annexed hereto.

4. The license shall be in duplicate, one copy of which will be given to the licensee, the other filed in the issuing office for reference.

5. (a) License-holders in possession of a Rs. 16-8 license for "Reserved Waters" are entitled also to fish in "Protected Waters" by any or all of the methods set forth in Section 14 *infra*, but a license for "Protected Waters" shall be confined in operation to those waters only; and (b) Any one possessing a license for "Protected Waters" and wishing to exchange the same for a Rs. 16-8 license for "Reserved Waters" can on application being made to the Secretary, Game Preservation Department, do so by paying the difference between Rs. 16-8 and the amount already paid.

6. A license granted under these rules shall be of general application and shall entitle the holder to fish in all the waters in the Jammu and Kashmir State of the class for which the license has been granted without regard to the local area in which any particular kind of water for which a license was originally asked for is situate. The above licenses are not transferable nor may they be shared between two or more fishermen.

7. The following are the recognized modes of fishing in any "Protected Waters":—

Khuri-Jal—Small meshed-net fixed to poles for catching small fish. Thorang-Jal—Casting net. Khuksha-Jal—Drag net. Kishup-Khuri-Jal—Small landing net. Walruz—Long line with hooks attached for fishing (limited to 500 yards). Narchoo—Spear. Bislai—Rod. Tokri-Jal—Large landing net.

8. The casting net to be used in "Reserved Waters" shall not exceed 20 feet in diameter and shall have meshes which are not smaller than "one-and-half inches" from knot to knot measured horizontally. 9. The practice of "stroke hauling," i.e., fishing by means of triangles, hooks, etc., with the object of foul hooking fish is illegal, and is punishable under Section 6 (a) of this Act. 10. The possession of nets is illegal save in hands of license-holders who are only permitted to keep such as are of the dimensions defined in the preceding section.

The following are the existing "Trout Waters" defined under State Fisheries Regulations, Notification No. 2:—

1. (1) The Liddar and its tributaries above Bhatkote bridge; (2) The Achhabal river, and the Arput, above the bridge of Dunipawa; (3) The Veshau and the Danwar streams from their sources to the boundary pillar one mile below the bridge at Koolgam: (a) The upper water of the Koolgam branch is closed except under a special permit which will only be issued to State Officials and others who have

some special claim for the grant of the permit ; (b) The lower water of (a) *supra* is now open for fishing from the notice board below the Watcher's hut to the boundary pillar *vide* (3) above ; (c) The Puranhal branch is a State Rakh and is closed. (4) The Arrah river from Dachigam Rakh to the bridge at Telhal ; (5) The Burzil branch of the Kishenganga river and the Gorai stream from their junction at Kan-zalwan to their respective sources ; (6) The Burdwan stream at Guraiz ; (7) The Wangut stream is a State Rakh and is closed ; (8) The Erin and Sirindar streams ; (9) The Biroo river from Makahanna to Socknag ; (10) The Bringhi river and its branches above the village of Aragam (a) The Nowboog branch is closed under the same conditions as 3 (a) above ; (11) The Lolab above the bridge at Raikpura ; (12) The Pohru above the bridge at Shallorah ; (13) Madmati or Bandipur river, above the bridge at Kaloosa ; (14) The Kokernag stream ; (15) The Panzetnag stream ; (16) Thrieker river in the Anantnag Tehsil under the same conditions as 3 (a) above ; (17) The Gangabal and adjoining lakes on the northern slopes of Mount Haramook ; (18) The Manisbal lake, and (19) The Sind river from one mile above Kangan to the Lar Weyil bridge ; (20) All tributaries of the above from the junction with the main stream to three miles up stream.

N. B.—portsmen possessing a Rs. 5 License for "Reserved Waters," *vide* Notification No. 8, and wishing to fish for country fish only in Nos. 1, 5, 11, 14, 15, 18 *supra*, can do so on obtaining a special permit from the Secretary, Game Preservation Department, and, on the distinct understanding that any English trout captured by them will be at once returned to the water. With the above exception, no person can fish in any of the "Trout Waters" unless he is in possession of Trout Fishing License,

vide Notification No. 8, or has been specially exempted by His Highness the Maharaja from taking out such a license, *vide* exception to Section 7 of the Jammu and Kashmir State Fisheries Regulation.

2. The trout fishing season extends from 1st April to 30th September.

3. The following are the sanctioned methods of fishing in the "Trout Waters," viz. :—

Fishing with artificial fly only on :—(2) The Achhabal and the Arput ; (3) The Koolgam branch of the Veshau ; *vide* 2 (a and b) *supra* ; (6) The Burdwan at Guraiz ; (8) The Erin and Sirindar ; (10) The Bringhi above the Ahlan junction and Now-boog rivers, and (13) The Madmati. Exceptions.—(a) Minnow and spinning baits are allowed on the Achhabal in the following localities —The Sansuma junction pool ; The Sansuma bridge pool ; The Boilers' pool and anywhere below the Arput junction at Tajiwara. (b) On the lower Bringhi (i.e., at and below the junction of the Ahlan stream) minnow and spinning baits are allowed. (c) On the Koolgam branch of the Veshau below the bridge at Koolgam. (d) On the Sind river below the Wangat junction. In all the "Trout Waters," rod fishing with artificial, natural and dead bait only is permitted. (N. B.—Natural bait does not include worm or frog.) Artificial fly includes all feathered lures but no kind of spinner.

4. Applications for licenses to fish in the "Trout Waters" should be made to the Secretary, Game Preservation Department, Srinagar, or, in his absence, to the Director, Trout Culture, care of Post Office, Srinagar.

5. Licenses are issued on payment of the following fee:—(a) For the season, Rs. 100; (b) For one week, Rs. 20; (c) For one day, Rs. 5.

6. The holder of Rs. 100 season license is entitled to fish in all the “Reserved” and “Protected” waters of Kashmir, a list of which can be obtained from the Secretary, Game Preservation Department, during the period for which it holds good.

7. Licenses are not transferable, nor may they be shared between two or more fishermen.

8. Licenses are issued subject to the following conditions:—(a) The number of trout allowed to be caught in one day is limited to 4, except on the Arrah, where the number is limited to 6. On obtaining the above number of fish, sportsmen must stop fishing for trout for the day. (b) A size limit of 10 inches is laid down, below which all fish must be returned. (N. B.—Fish of less than 10 inches which are badly hooked and unlikely to recover should be kept and not counted under (a) above.) (c) Fishing in the Trout streams (*vide* paragraph 1) is limited to one week at a time except:—On the Arrah river as defined in paragraph 1, where it is limited to one day; and on the Liddar river, the Kishenganga to Lolab, Pohru and the lake Manisbal where there are no such limitations. (N. B.—When the above rivers are not occupied by license-holders under paragraph 5 (a) and (b), daily licenses may be issued by the Secretary, Fisheries, at his discretion.)

9. Whoever is found fishing in any " Trout Waters " without a proper license, or whoever commits a breach of any of the rules set forth in paragraphs 3, 7 and 8, or whoever uses dynamite or other explosive substance or puts any poison, lime, or other noxious matter into any water with intent to destroy or catch any fish which may be therein, or whoever erects any fixed engine, weir or sluice on the bank of, or in, any water for the purpose of capturing fish, or whoever uses for that purpose any instrument other than those specified in paragraph 3, or any net, or whoever aids or abets the commission of any of the above offences, shall be liable, on first conviction, to be punished with imprisonment (either rigorous or simple) which may extend to one month or with fine which may extend to Rs. 50, or with both. In addition to the above punishment, any fixed engine or net or other article irregularly used for the destruction or capture of fish shall be liable to be confiscated by the Durbar.

NOTE.—The term " Fixed Engine " used above has been defined in the Jammu and Kashmir Fisheries Regulation of *Sambat* 1960 to mean and include any net, cage, trap, sluice or other contrivance for taking fish fixed in the soil or made stationary in any other way, but the erection of dams for the working of mills and the like is permitted, though in all such cases a free channel must be left open for the passage of fish up or down the river.

10. Any person continuing to commit an offence mentioned in the preceding paragraph after he has been warned by any authority to desist therefrom shall, in addition to the punishment awardable on first conviction, be liable to be punished

with a fine which may extend to Rs. 10 for each and every day succeeding that on which he was so warned.

11. An offender convicted twice or more frequently of any offence mentioned in paragraph 9, shall be liable to be punished with imprisonment (either rigorous or simple) for a period not exceeding two months and with a fine not exceeding Rs. 100 or both.

12. Fishing in "Sanctuaries," a list of which can be obtained from the Secretary, Game Preservation Department, Srinagar, is absolutely prohibited. The punishment for breach of this rule is :—

- (a) for a first offence, imprisonment (either rigorous or simple) for a period not exceeding two months or fine which may extend to Rs. 100 or both, and
- (b) for a second or subsequent offence, imprisonment (of either description)
 - o a period not exceeding six months or fine not exceeding Rs. 500 or both.

These punishments are liable to be in addition to that mentioned at the end of paragraph 9.

13. Offences punishable under these rules shall be tried by the State Courts in the ordinary way and in accordance with the Criminal Law of the State except

in the case of persons, who are not liable to the jurisdiction of the State Courts, when the trial shall be in accordance with the provisions of the law for the time being in force relating to such offences.

14. Any person or persons giving such *bona fide* information as shall lead to a conviction under these Regulations (Fisheries), shall be entitled to a reward which may, at the discretion of the Magistrate trying the case, extend to the full amount of the fine inflicted.

KATHIAWAR.

The following game regulations are in force in the Kathiawar Political Agency:—

1. There shall be a close season for the undermentioned animals between 15th July and 15th October in each year:—Nilgai, antelopes and deer of all descriptions, hares, black and painted partridge, close season from 1st April to 15th October; bustards. 2. All members of the Association pledge themselves not to shoot, snare, or in any way molest any of the game above mentioned during the close season, nor will they encourage or knowingly permit any one to do so, nor will they purchase or receive as gifts any of the animals above mentioned alive or dead, during the close season. 3. The Association agree, that during the open season they will only

pursue game in a manner recognized by the rules of sport, and that they will discourage as far as lies in their power, any attempt to kill game, animals or birds, by unsportsman-like means. 4. Chiefs and Talukdars, Members of the Association, agree that they will not allow any but approved persons to pursue game, in their respective territories, that they will grant licenses for sporting purposes to such approved persons only, and that they will keep registers of such licenses, which will only be available for the year in which they are granted. 5. No holder of a license will be allowed to pursue game during the close season, or to pursue it in an unsportsman-like way in the open season.

MADRAS PRESIDENCY.

The following rules are for the regulation of hunting, shooting and fishing within the limits of all reserved forests situated in the Presidency of Madras, except those situated in the area covered by the special Nilgiri Game Rules :—

(1) Subject to the provisions of Madras Act I of 1873, any person who may desire to hunt or shoot within the limits of any or all reserved forests in any district, shall be bound to take out a license therefor at the office of the Collector of the

district. Hunting or shooting without such license is prohibited. (2) Such license shall not be transferable. It will be available only for the currency of the season to which it relates, whether it be taken out at the commencement or during the currency of that season. The Collector may at his discretion grant licenses to non-commissioned officers and men of His Majesty's Forces, on proof to his satisfaction that the application for the license is made for *bona fide* sporting purposes, on such special terms as he may think fit. (3) The Collector may refuse to grant a license, if the applicant has been convicted of an offence against the rules under the Madras Forest Act, 1882, relating to hunting, shooting or fishing, or for any other special reason to be stated in writing. (4) Within the limits to which these rules apply, no person shall, at any time of the year, shoot at, trap, or snare any of the insectivorous birds specified in the schedule attached to these rules.* (5) No license taken out under the foregoing rules will be held to give authority to hunt or shoot in contravention of Rule 4. (6) Beating and the setting of traps or snares is forbidden, except by the special permission of the Collector.

[**Schedule*.—Swallows, swifts, goatsuckers, trogons, bee-eaters, rollers, woodpeckers, cuckoos, hoopoes, shrikes and minivets, drongos or kingcrows, fly-catchers, ground-thrushes, babbling thrushes, Wynaad laughing thrush, Nilgiri laughing thrush and Palmi laughing thrush, babblers and ground-babblers, warblers, chats, red starts robins, wagtails, pipits, and crow tits.]

Fishing.

(7) The Collector may, from time to time, by notification in the *District Gazette*, declare all or any rivers, streams or lakes, situated within all or any reserved forests in the district to be closed against fishing without license. No license is required for fishing in reserved forests not closed by special order, but fishing by nets or rods is alone permitted, and the Collector is authorized to regulate the size of the mesh of the former. (8) The use of poison and of dynamite or other explosive in water and the setting of cruives or fixed engines or snares for the capture or destruction of fish, are absolutely prohibited anywhere within the limits to which these rules apply. (9) Against any order issued by the Collector under the above rules, an appeal shall lie to the Board of Revenue, if filed within three months of the date of the order appealed against.

General Rules to Regulate the Pursuit of Game in Reserved Lands.

The following rules are for the regulation of hunting, shooting and fishing in land which is notified under Section 4 of the Madras Forest Act V of 1882, and not included in a reserved forest and any area which has been or may hereafter be declared by the Collector of a district to be a "Reserved Land" in the manner

prescribed in Rule 5 of the rules under Section 26 of the said Act published as Notification No. 419, at Pages 981—983 of Part I of the *Fort St. George Gazette*, dated 21st August, 1894, and to prohibit the poisoning of water and the setting of traps or snares within such limits. These rules do not apply to the area covered by the Special Nilgiri Game Rules :—

Rule 1.—Subject to the provisions of Madras Act I of 1873, no license shall be required in any district for hunting or shooting within the limits of any land which is notified under Section 4 of the Madras Forest Act (V of 1882), and not included in a reserved forest and any area which has been or may hereafter be declared by the Collector of a district to be a “Reserved Land” in the manner prescribed in Rule 5 of the rules under Section 26 of the said Act published as Notification No. 419, at Pages 981—983 of Part I of the *Fort St. George Gazette*, dated 21st August, 1894. Provided that the Collector may, by notification in the *District Gazette*, declare that any particular part or parts of such land shall be closed in any year against hunting and shooting during any prescribed period and may modify or cancel such notification ; and after the publication of the notification, no person may hunt or shoot in such land during such period.

Rule 2.—Within the limits to which these rules apply no person shall, at any time of the year, shoot at, trap or snare any of the insectivorous birds specified in the schedule attached to these rules.

Rule 3.—Beating and the setting of traps or snares is forbidden, except by the special permission of the Collector.

Rule 4.—The Collector may from time to time, by notification in the *District Gazette*, declare all or any rivers, streams or lakes situated within any land in the district at the disposal of Government and not included in a reserved forest, to be closed against fishing without license. No license is required for fishing in such land not closed by special order, but fishing by nets or rods is alone permitted and the Collector is authorized to regulate the size of the mesh of the former.

Rule 5.—The use of poison and of dynamite or other explosive in water and the setting of the cruives or fixed engines or snares for the capture or destruction of fish, are absolutely prohibited anywhere within the limits, to which these rules apply.

Rule 6.—Against any order issued by the Collector under the above rules an appeal shall lie to the Board of Revenue, if filed within three months of the date of the order appealed against.

North Coimbatore and Kollegal Forest Divisions.

1. Subject to the provisions of Madras Act I of 1873, any person who may desire to hunt or shoot within the limits of any reserved or unreserved lands * *

* * * * * shall be bound to take out a license therefor at the office of the Collector of Coimbatore. Hunting or shooting without such a license is prohibited.

2. Such license shall not be transferable. It will be valid only to the end of the season to which it relates at whatever time in the season it is taken out. The Collector may at his discretion grant licenses to non-commissioned officers and men of His Majesty's Forces on such special terms as he may think fit for *bona fide* sporting purposes.

3. The Collector may refuse to grant a license to an applicant who has been convicted of an offence against the rules under the Madras Forest Act (V of 1882) relating to hunting, shooting or fishing or for any other special reason to be stated in writing.

4. Within the limits to which these rules apply, no person shall, at any time of the year, shoot at, trap or snare any of the insectivorous birds specified in the schedule annexed to these rules.

5. No license taken out under the foregoing rules will be held to give authority to hunt or shoot in contravention of Rule 4.

6. Beating and the setting of traps or snares is forbidden except by the special permission of the Collector.

Special conditions to be attached to Licenses granted to shoot in the Coimbatore and Kollegal Forest Divisions :--

For the issue of shooting licenses, the reserves in the North Coimbatore and the Kollegal divisions will be divided into six blocks * * * * *

* * * * * Hunting or shooting within these areas is not allowed except on a license.

2. (a) As a rule not more than one party will be allowed to shoot in a block in any one calendar year, but the Collector may relax this rule at his discretion. (b) A party will be limited to two guns. (c) Blocks will be allotted in the order of applications. If applicants do not mention in their applications in what order they prefer the blocks the District Forest Officer will allot what he considers the best block to the first applicant and so on. (d) A party vacating a block for ten days or more will lose their lien on it. (e) License holders will have a lien upon the block allotted them subject to (d) above, but they will not have an exclusive right to the block as against touring officials of the district holding licenses or the permanent residents of the divisions holding licenses who may shoot in any block whether allotted or not subject to the etiquette usual among sportsmen. 3. Persons permanently resident in the Kollegal division and in that portion of the North Coimbatore division, north of the Bhavani river will be considered residents for the purposes of 2 (e). 4. The expression "touring officials of the district" shall mean all officials who are

required or permitted to tour in the Kollegal or North Coimbatore divisions on duty. 5. The fee for a license will be Rs. 10 for permanent residents and touring officials, and Rs. 50 for visitors. 6. No one shall shoot nilgai or the females or immature males of bison, sambhar, cheetal, antelope, four-horned antelope, muntjac or jungle sheep. The expression "mature males" in the case of sambhar and cheetal shall mean stags in hard horn measuring 25 inches length or over. 7. A license-holder will only be permitted to shoot up to the following limit :—

Bison, 2 (except in the Madeswarammalai block V where the limit is 1), sambhar 3, cheetal 3, antelope 1, four-horned antelope 2. No limit is fixed at present in the case of other species. The limit fixed is strictly individual and if two licensees shoot in a party, one of them cannot exceed the limit on the ground that the other licensee is short of it. 8. The Collector may at any time close any part of any forest to shooting entirely or for certain species whether such area is included in a block for which licenses have been given or not. 9. Whenever any animal is shot, the license-holder must present his license for endorsement to the nearest Forest Officer not below the rank of Forest Guard, and at the conclusion of the year, or when the licensee finally quits the shooting block, the license must be returned to the District Forest Officer of the division in which the block is situated with a statement of what has been shot. Trophies must be produced for inspection whenever required by a Forest Officer not below the rank of Forest Guard.

10. License-holders will be bound to give to the nearest Forest Officer without delay information which they may possess regarding the commission or intention to commit any forest offence or regarding the occurrence of fire (see Section 23 of the Madras Forest Act). 11. Nothing in this license shall be deemed to permit the capture or removal of any living animal. 12. Infringement of any of these rules may entail the cancellation of the permit and the confiscation of all trophies.

Rules to Regulate the Pursuit of Game in the Nilgiris.

The following rules regulate hunting and shooting in the reserved and rented forests, fuel and fodder reserves, grazing grounds, Toda patta lands and areas under special fire-protection within the following limits:—

(1) The south bank of the Bhavani river from Attapadi, in the valley of that name, to its junction with the Moyar river; (2) from that point the north bank of the Moyar as far west as the boundary of the Nilgiri District; and thence the boundary of the said district as determined for ordinary administrative purposes, to Nilgiri Peak; (3) from that point the western crest of the Nilgiri hills to its termination below Sispara; (4) thence along the northern, western and southern crests of the Silent valley range to its southernmost point; (5) from that point to Attapadi. 1. Under Section 33 of the Madras Forest Act V of 1882, the Mudumalai and Kumbarakolli rented forests and all Toda patta lands within the above limits

are declared, for the purpose of these rules, to be reserved forests within the meaning of Section 21 of the said Act. 2. No person shall hunt or shoot within the limits to which these rules apply without a license issued by the Collector of the Nilgiris. Provided that this rule shall not apply to the hunting of jackals by the Ootacamund Hunt. 3. Such license shall be issued on payment of such fees as the Government may from time to time prescribe and shall set forth the purport of these rules and of any notifications issued thereunder. It shall not be transferable and shall remain in force from the date on which it is issued till the 15th September next following subject to the provisions of Rules 4, 5 and 7. 4. The Collector may refuse to grant a license under these rules to any applicant if the latter has been convicted of a breach of these rules or of the Nilgiri Fishing Rules or of any rule or notification previously in force to regulate fishing and shooting in the area to which these rules apply or of any other offence under Acts II of 1879 (Madras), IV of 1879 (India), or V of 1882 (Madras) or of any breach of any rules framed thereunder or for any other reason to be stated in writing and may cancel any license already granted for a like reason. Against any order of the Collector so refusing to grant a license or cancelling a license, an appeal shall lie to the Board of Revenue if filed within three months from the date of the order appealed against.

5. The Collector of the Nilgiris shall have power to notify that the whole or any part of the area to which these rules apply shall be closed for the whole or any part of any year against all hunting or shooting or to the pursuit, capture or killing

of any particular species of game as defined in Section 2 of the Nilgiri Game and Fish Preservation Act, 1879, and notifications thereunder. 6. Except with the sanction of the Collector, no person shall shoot at, wound or kill within the area to which these rules apply, the females or immature males of any of the following animals or mature male sambhar or spotted deer which are hornless or whose horns are in velvet :—Bison or gaur, sambhar, spotted deer, ibex, antelope. Provided that any member of the Ootacamund Hunt may kill any sambhar brought to bay by the hounds while in the proper pursuit of hunting. The Collector shall have power to notify a definition of an “immature male” in the case of each of the above species of game. 7. The Collector shall further have power to frame and notify other conditions upon which alone licenses shall be granted. Such conditions may include restrictions upon the maximum bag to be shot by a license-holder, areas open to beating, methods of beating, methods of killing particular kinds of game and other matters connected with the preservation of game. The breach of any of such conditions shall be punishable by the cancellation of the offender’s license or, if the license-holder prefers, by the imposition of a fine, not exceeding Rs. 25, in lieu of such cancellation. 8. Notifications issued by the Collector under Rules 5, 6 and 7 shall be published in the *District Gazette* and entered in the licenses issued under Rule 3. 9. The setting of traps or snares for any game as defined in Act II of 1879 or notifications thereunder is forbidden throughout the area to which these rules apply. 10. Any person convicted before a Magistrate of an infringement of Rules

2, 6 and 9 shall be liable to the punishment provided by Section 21 of the Madras Forest Act V of 1882 if the offence was committed within a reserved forest or land declared to be reserved forest for the purpose of these rules, or to the punishment provided by Section 26 of the same Act if it was committed within land at the disposal of Government.

11. Every person appointed by the District Forest Officer for the purpose of enforcing these rules shall be deemed to be a "Forest Officer" under Act V of 1882.

Conditions under which a License to Hunt and Shoot is granted under Section 21 (h) of Act V of 1882 (The Madras Forest Act) :—

(1) The license is not transferable and must be shown on demand to any Forest Officer, any Revenue Officer not below the rank of Revenue Inspector, or to any Police Officer not below the rank of Head Constable. It holds good within the area and for the period shown * * * * and is subject to the following special conditions :—Provided that—(a) in particular localities the Collector, by special order in the *District Gazette*, may prohibit the hunting and shooting of the females and young of particular animals throughout the year; (b) the Board of Revenue may similarly prohibit the hunting and shooting of males of particular animals throughout the year; and (c) this license does not authorize

the shooting at, or destruction of, wild elephants otherwise than in accordance with the provisions of Madras Act I of 1873.

(2) Within the limits specified * * * no person shall, at any time of the year, shoot at, trap or snare any of the insectivorous birds specified in the schedule hereunto annexed.

(3) This license will not be held to give authority to hunt or shoot in contravention of conditions (1) and (2):

Provided that the Collector will have power—(i) to grant licenses to *bona fide* applicants for the destruction of dangerous animals at any time of the year (by “dangerous animals” are meant animals for the destruction of which rewards are offered); and (ii) to grant special licenses, at such rates as he thinks fit, to professional shikaris and jungle tribesmen to hunt or shoot during such months and under such conditions as he considers necessary.

(4) Beating and the setting of traps or snares for game is forbidden, except by the special permission of the Collector.

Fishing.

(5) The Collector may, from time to time, by notification in the *District Gazette* declare all or any rivers, streams or lakes, situated within all or any reserved forests in the district to be closed against fishing for the whole or any part of a year. No

license is required for fishing in reserved forests not closed by special order, but fishing by nets or rods is alone permitted and the Collector is authorized to regulate the size of the meshes of the former.

(6) The use of poison and of dynamite or other explosive in water, the setting of cruives or fixed engines or snares for the capture or destruction of fish, and the damming or baling of water for the capture of fish, are absolutely prohibited anywhere within the limits to which these rules apply.

(7) Against any order of the Collector an appeal shall lie to the Board of Revenue, whose decision shall be final, if filed within three months of the order appealed against and the Board's decision is final.

* * * * *

[B. P. F. No. 433, dated 21st September, 1896.]

Any breach of the above conditions or the commission of any forest offence will render the holder liable to have his license cancelled.

MANIPUR STATE.

The Game Rules approved by the Manipur State Darbar are :—

1. Fishing with dynamite or poison is absolutely forbidden. 2. Fishing in hill streams with drag nets, or by *bandhs*, or by cast nets in conjunction with fouling

of the water, by throwing in earth or other means, is forbidden. 3. No Manipuri may fish in a hill stream without a permit from the President of the Darbar. 4. No one may fish at all, except with a rod, in the following reserves :—(1) The Barak, from the source to the point below Maram where it turns to the west ; (2) the Khuga, from Tingangphai to the western boundary of Saitol village. 5. No one may fish in the following reserves without a permit from the President of the Darbar, except with a rod :—(1) The Thoubal river, from the Ukhrul road suspension bridge to the point below the cholera camps where it turns south ; (2) the Chakpi river, from the mouth to the source. 6. No deer of any kind are to be killed in the valley without a permit from the President of the Darbar. 7. Permits to kill not more than two Manipuri stags (*Sangai laba*) in a season will be granted on payment of the following fees :—(1) To residents in the Manipur State, Rs. 10 ; (2) to persons residing outside the Manipur State, Rs. 25. 8. No female deer, immature males or males in velvet are to be killed anywhere in the Manipur State.

9. The following close seasons are prescribed :—Spotbill (*nganu pired*), cotton teal (*nganu pegdek*), whistling teal (*tingi*), partridge (*urenbi*), quail (*soibol*)—from 1st April to 31st August. Egrets of all kinds (*urok*, etc.)—the whole year. 10. No one may trade in egret feathers or be in possession of them, except with a permit from the President of the Darbar.

Penalties :—(a) For the first offence, a fine not exceeding Rs. 100. (b) For the second and subsequent offences, imprisonment up to six months, or a fine, or both.

(c) For the second or subsequent offences of trading in, or being in possession of, egret feathers, the accused will be liable to expulsion from the State. (d) The guns, spears, traps, fishing instruments, etc., used by any person transgressing these rules will be liable to confiscation.

MARWAR.

The shooting rules in force in Marwar include the following :—

(1) Shooting within the limits of all lands, declared forest or Reserved for *shikarkhana* purposes is prohibited in the case of all animals and birds, other than wolves and wild dogs, except with the written permission of His Highness the Maharaja or under license issued according to these rules. Such permission may be given by general or special order.

(2) The shooting of tigers, panthers (including leopards), bears, sambhar and cheetal in all parts of the Marwar State is strictly prohibited except with the written permission of His Highness the Maharaja. (3) All inhabitants of Marwar, including State or Railway employees stationed on duty within the boundaries of the State, together with any guests temporarily residing with them for purposes of sport, are permitted, subject to the restrictions contained in Rules (1) and (2) to shoot anywhere

in Marwar without obtaining a license. (4) Any person other than an inhabitant of Marwar desiring to shoot within the limits of the State or any inhabitant of Marwar desiring to shoot within the areas reserved under Rule (1) shall obtain a license therefor. (5) Application for licenses shall be presented in the case of inhabitants of Marwar direct to the Mehkma Khas, and in the case of persons other than the inhabitants of Marwar through the Resident, Western Rajputana States. (6) The application shall state in as much detail as possible the area in which the applicant desires to shoot, the period during which he wishes to avail himself of the privilege and the number and names of the guests or retainers which he wishes to bring with him. (7) Whenever a license is issued, a copy or an intimation of the salient entries therein shall be sent to the Hakims and Sub-Inspectors of Police within whose jurisdiction the license for shooting has been granted, and in the case of areas reserved under Rule (1), or if the license extends to the estates of any Jagirdars to the Judicial Superintendents and the Jagirdars concerned. (8) Every license-holder shall carry his license with him and shall be bound to show it on demand to any official of the Forest and Shikarkhana Departments or to the hakims or police officials not below the rank of sub-inspectors and in the case of a person shooting within the limits of a Jagir to the Jagirdar or person authorized by him in this behalf.

(9) Licenses are not transferable and no person other than those mentioned in the licenses are permitted to shoot. (10) When a license-holder leaves the

locality in which he has been permitted to shoot or as soon as he ceases to avail himself of the privileges allowed thereunder, he shall return the license to the issuing authority duly endorsed with any particulars enjoined by these rules. (11) Every license shall be issued and all permission to shoot shall be considered to be subject to the condition that a person shooting within the limits of a Jagir shall, on the request of any Jagirdar who for any purpose is preserving game, refrain or desist from shooting in such area as may be pointed out to him as a game preserve.

(12) Every license or permit shall contain, or be subject to, the following conditions :—

(1) That only such head of game as are endorsed in the license shall be shot and no others. (2) That no animals or birds, the shooting of which is prohibited, shall be shot. The names of these will be endorsed on the license and they may be revised from time to time. (3) That the shooting of females and immature males or males with horns in velvet or animals that are held sacred is strictly prohibited. (4) That the setting of any kind of spring gun, snare, trap, or pit-fall is prohibited. (5) That the tying up of bullocks, cows or heifers is strictly prohibited. (6) That the license-holder shall not sit up over water-holes or salt-licks. (7) That the license-holder shall immediately report to the Mehkma Khas at Jodhpur and to nearest hakim any injury received by himself or any of his party in the pursuit of game or caused by himself or any of his party to any human being or to any domestic animal.

(13) Any person found shooting within any of the reserved areas in contravention of Rule (1) or shooting within the boundaries of the Marwar State without license in contravention of Rule (4) committing any breach of the conditions of a license granted under Rules (12) and (13) shall be liable to a fine not exceeding Rs. 50 or shall be liable to pay such compensation as may be specially determined and also to the forfeiture of all skins, heads and other trophies of any animal killed by him. (14) Any person shooting any animal in contravention of Rule (2) shall be liable to a fine which may extend to Rs. 250 for each animal shot or shall be liable to pay such compensation as may be determined together with the forfeiture of all arms used by him at the time as well as of all skins, heads and trophies.

Fishing.

(15) The trapping or shooting of fish is prohibited in all tanks, lakes and streams in Marwar. (16) Angling is permitted without restriction except in the tanks noted below, for which permission must be obtained from the authorities noted below :—

Kailana and Bijolai—Mehkna Khas. Balsamand—His Highness the Maharaja Sahib. (17) Any person found trapping or shooting fish or angling without permission in prohibited tanks or waters shall be liable to pay such monetary penalty as may be determined suitable by the Darbar in each case.

Birds and animals held sacred the shooting of which is strictly prohibited :—
Pigeons (blue rock), monkeys (including langoors), peacocks, kite (cheel).

Close Season.

Greater bustard (ghoravan)—partridge, jungle fowl and spur fowl—April 1st to September 15th. Sand-grouse—April 1st to August 31st. Black buck—April 1st to September 30th. Sambhar, chinkara and choetal—uly to February. Hare—July, August and September.

MEWAR.

Rules for Shooting in Mewar are :

I.—The slaughter of the following animals and birds is strictly prohibited :—Nilgai or blue bull ; peacocks ; blue pigeons. II.—Large game shooting without a license is strictly prohibited in Mewar territory. III.—Small game shooting is permitted in Mewar territory within a radius of 8 miles from Neemuch, and for a distance of 4 miles on either side of the Rajputana-Malwa Railway line, but not

near the following large game preserves :—1. Modikhara, near Chitor; 2. Modi Mugra, near Chitor; 3. Sirodi-ka-Mugra, near Chitor; 4. Satpara-ki-Odi, near Chitor; 5. Senwa-ka-Mugra, near Chitor; 6. Baradi-Thukrawo, near Chitor; 7. Gatawli-ko and Downo-Mugra, near Chitor; 8. Dhadhan-ka-Mugra, near Chitor; 9. Netawal-ka-Mugra, near Chitor; 10. Midkiripal (Mandalgarh); 11. Nila-ka-Mugra; 12. Gungrar; 13. Hamirgarh; 14. Mehja.

IV.—Shooting without a license is prohibited in the villages of Kanaui, Brai and Arnauda in the Nimbahera (Tonk) District.

THE NILGIRIS

In supersession of all previous notifications on the subject, His Excellency the Governor in Council is pleased, under Sections 21, 26, 33 and 63 of the Madras Forest Act (V of 1882) to make the following rules to regulate hunting and shooting in the reserved and rented forests, fuel and fodder reserves, grazing grounds, Toda patta lands and areas under special fire-protection within the following limits :—

(1) The south bank of the Bhavani river from Attapadi, in the valley of that name, to its junction with the Moyar river;

(2) from that point to the north bank of the Moyar as far west as the boundary of the Nilgiri District; and thence the boundary of the said district, as determined for ordinary administrative purposes, to Nilgiri Peak;

(3) from that point to the western crest of the Nilgiri hills to its termination below Sispara;

(4) thence along the northern, western and southern crests of the Silent Valley range to its southernmost point;

(5) from that point to Attapadi.

1. Under Section 33 of the Madras Forest Act (V of 1882), the Mudunalai and Kumbarakolli rented forests and all Toda patta lands within the above limits are declared, for the purpose of these rules, to be reserved forests within the meaning of Section 21 of the said Act.

2. No person shall hunt or shoot, within the limits to which these rules apply, without a license issued by the Collector of the Nilgiris. Provided that this rule shall not apply to the hunting of jackals by the Ootacamund Hunt.

3. Such license shall be issued on payment of such fees as the Government may from time to time prescribe, and shall set forth the purport of these rules and of any notifications issued thereunder. It shall not be transferable and shall remain

in force from the date on which it is issued till the 15th September next following, subject to the provisions of Rules 4, 5 and 7.

4. The Collector may refuse to grant a license under these rules to any applicant if the latter has been convicted of a breach of these rules or of the Nilgiri Fishing Rules or of any rule or notification previously in force to regulate fishing and shooting in the area to which these rules apply, or of any other offence under Act II of 1879 (Madras), IV of 1879 (India) or V of 1882 (Madras) or of any breach of any rules framed thereunder or for any other reason to be stated in writing, and may cancel any license already granted for a like reason. Against any order of the Collector so refusing to grant a license or cancelling a license, an appeal shall lie to the Board of Revenue if filed within three months from the date of the order appealed against.

5. The Collector of the Nilgiris shall have power to notify that the whole or any part of the area to which these rules apply shall be closed for the whole or any part of any year against all hunting or shooting, or to the pursuit, capture or killing of any particular species of game as defined in Section 2 of the Nilgiri Game and Fish Preservation Act, 1879, and notifications thereunder.

6. Except with the sanction of the Collector, no person shall shoot at, wound or kill, within the area to which these rules apply, the females or immature males,

of any of the following animals or mature male sambhar or spotted deer which are hornless or whose horns are in velvet:—

- | | |
|--------------------|-------------------|
| (1) Bison or Gaur. | (3) Spotted deer. |
| (2) Sambhar. | (4) Ibex. |
| (5) Antelope. | |

Provided that any member of the Ootacamund Hunt may kill any sambhar brought to bay by the hounds while in the proper pursuit of hunting. The Collector shall have power to notify a definition of an "immature male" in the case of each of the above species of game.

7. The Collector shall further have power to frame and notify other conditions upon which alone licenses shall be granted. Such conditions may include restrictions upon the maximum bag to be shot by a license-holder, areas open to beating, methods of beating, methods of killing particular kinds of game and other matters connected with the preservation of game. The breach of any of such conditions shall be punishable by the cancellation of the offender's license or, if the license-holder prefers, by the imposition of a fine not exceeding Rs. 25, in lieu of such cancellation.

8. Notifications issued by the Collector under Rules 5, 6 and 7 shall be published in the *District Gazette* and entered in the licenses issued under Rule 3.

9. The setting of traps or snares for any game as defined in Act II of 1879 or notification thereunder is forbidden throughout the area to which these rules apply.

10. Any person convicted before a Magistrate of an infringement of Rules 2, 6 and 9 shall be liable to the punishment provided by Section 21 of the Madras Forest Act (V of 1882) if the offence was committed within a reserved forest or land declared to be reserved forest for the purpose of these rules, or to the punishment provided by Section 26 of the same Act if it was committed within land at the disposal of Government.

11. Every person appointed by the District Forest Officer for the purpose of enforcing these rules shall be deemed to be a "Forest Officer" under Act V of 1882.

Unreserved Lands in the North Coimbatore and Kollegal Forest Divisions.

In exercise of the powers conferred by Section 26 (f) of the Madras Forest Act (V of 1882) and in partial modification of the rules published in Notification No. 431 at Pages 1094-1095, Part I of the *Fort St. George Gazette*, dated 1st September, 1896, His Excellency the Governor in Council is pleased to close to hunting and shooting all reserved and unreserved lands in the North Coimbatore and Kollegal divisions except on license and as provided for in the following rules ; provided that nothing

in these rules shall apply to cultivating ryots who take out licenses for the *bona fide* protection of their crops:—

1. Subject to the provisions of Madras Act I of 1873, any person who may desire to hunt or shoot within the limits of any reserved or unreserved lands specified in the sub-joined Schedule I, shall be bound to take out a license therefor at the office of the Collector of Coimbatore. Hunting or shooting without such a license is prohibited.

2. Such license shall not be transferable. It will be valid only to the end of the season to which it relates at whatever time in the season it is taken out. The Collector may at his discretion grant licenses to non-commissioned officers and men of His Majesty's Forces on such special terms as he may think fit for *bona fide* sporting purposes.

3. The Collector may refuse to grant a license to an applicant who has been convicted of an offence against the rules under the Madras Forest Act (V of 1882) relating to hunting, shooting or fishing or for any other special reason to be stated in writing.

4. Within the limits to which these rules apply, no person shall, at any time of the year, shoot at, trap or snare any of the insectivorous birds specified in Schedule II annexed to these rules.

5. No license taken out under the foregoing rules will be held to give authority to hunt or shoot in contravention of Rule 4.

6. Beating and the setting of traps or snares is forbidden except by the special permission of the Collector.

Special Conditions to be attached to Licenses.

For the issue of shooting licenses the reserves in the North Coimbatore and the Kollegal divisions will be divided into six blocks as shown in Schedule I. The reserved and unreserved lands specified in Schedule II lie within the blocks mentioned in Schedule I. Hunting or shooting within these areas is not allowed except on a license.

2. (a) As a rule, not more than one party will be allowed to shoot in a block in any one calendar year, but the Collector may relax this rule at his discretion.

(b) A party will be limited to two guns.

(c) Blocks will be allotted in the order of applications. If applicants do not mention in their applications in what order they prefer the blocks, the District Forest Officer will allot what he considers the best block to the first applicant and so on.

(d) A party vacating a block for ten days or more will lose their lien on it.

(e) License-holders will have a lien upon the block allotted them subject to (d) above, but they will not have an exclusive right to the block as against touring officials of the district holding licenses, or the permanent residents of the divisions holding licenses who may shoot in any block, whether allotted or not, subject to the etiquette usual among sportsmen.

3. Persons permanently resident in the Kollegal division, and in that portion of the North Coimbatore division north of the Bhavani river, will be considered residents for the purpose of 2 (e).

4. The expression "touring officials of the district" shall mean all officials who are required or permitted to tour in the Kollegal or North Coimbatore divisions on duty.

5. The fee for a license will be Rs. 10 for permanent residents and touring officials, and Rs. 50 for visitors.

6. No one shall shoot nilgai or the females or immature males of bison, sambhar, cheetal, antelope, four-horned antelope, muntjac or jungle sheep.

The expression "mature males" in the case of sambhar and cheetal shall mean stags in hard horn measuring 25 inches in length or over.

7. A license-holder will only be permitted to shoot up to the following limit :—

Bison	..	..	..	..	2 (except in the Madeswarannala Block V, where the limit is 1).
Sambhar	..	..	..	..	3
Cheetal	..	..	..	..	3
Antelope	..	..	..	..	1
Four-horned antelope	..	..	..	..	2

No limit is fixed at present in the case of other species.

The limit fixed is strictly individual, and if two licensees shoot in a party, one of them cannot exceed the limit on the ground that the other licensee is short of it.

8. The Collector may at any time close any part of any forest to shooting entirely or for certain species, whether such area is included in a block for which licenses have been given or not.

9. Whenever any animal is shot, the license-holder must present his license for endorsement to the nearest Forest Officer not below the rank of Forest Guard and at the conclusion of the year, or when the licensee finally quits the shooting block, the license must be returned to the District Forest Officer of the division in which the block is situated, with a statement of what has been shot. Trophies must be produced for inspection whenever required by a Forest Officer not below the rank of Forest Guard.

10. License-holders will be bound to give to the nearest Forest Officer without delay information which they may possess regarding the commission or intention to commit any forest offence or regarding the occurrence of fire (see Section 23 of the Madras Forest Act).

11. Nothing in this license shall be deemed to permit the capture or removal of any living animal.

12. Infringement of any of these rules may entail the cancellation of the permit and the confiscation of all trophies.

THE NIZAM'S DOMINIONS.

THE Hyderabad Game Regulations contain the following sections :—

Portions of His Highness' Dominions may from time to time be demarcated and reserved as His Highness' preserves or the Government preserves. A notification specifying the respective boundaries of these preserves shall be published in the *Jarida*. On and from the date of the said notification, no one shall be allowed to kill, shoot or capture in His Highness' preserves, without the previous permission of His Highness, or in the Government preserves without the Minister's permission.

His Highness' preserves shall be under the direct control of His Highness' Shikar Department. The Paigah Nobles, the owners of Samasthans and the Jagirdars, are entitled to grant or refuse permission for shooting in their respective Elakas. The provisions of these Regulations, relating to close season for small game, and to the destruction of hinds and does, buffaloes, bison, cheetahs, cubs and the young of deer, as laid down in Sections 8 and 9, shall in all classes, be strictly applicable to them.

Subject to the provisions of the two last-named sections the big game country in His Highness' Dominions shall for the purposes of these Regulations be divided into four circles, or blocks as follows :—

1st Circle or Block—Half of Mahbubnagar District, comprising the Talukas of Amrabad, Nagar-Karnul and Kalyakurti, Parbhani, Nanded and Bir.

2nd Circle or Block—Aurangabad, Karimnagar, Nalgonda and half Adilabad, comprising Nirmal, Kinvat, Mahore, Adilabad and Lakshatipett.

3rd Circle or Block—Warangal (excepting His Highness' and the Government preserves included in the Pakhal and Mahbubabad talukas, and the talukas of Madhira and Yellandu, respectively), Medak, Bedar, Raichur, Atrai-Balda and the other half of Mahbubnagar District comprising Mahbubnagar, Pargi and Makhtal.

4th Circle or Block—Nizamabad, Naldurg and half Adilabad comprising Jangaon, Rajura, Sirpur, Chinnur and Tandur.

(1) One circle only shall be open for shooting each year from the 1st March to 31st May and again for 10 days at Christmas. Provided that only one-half of the districts comprising such circle shall be open for shooting. Provided also that no person shall be allowed to shoot in the Atrai-i-Balda District without the special permission of His Highness. (2) Shooting areas in the districts of the open circles shall be defined, and each of the said areas shall in no case exceed one taluka. Shooting parties shall be restricted to the areas as defined above.

(1) The shooting, killing or snaring of the following animals is strictly prohibited throughout the year:—Cheetah, bison buffalo, doe, sambhar, cow nilgai. All females and the young of deer and stags in velvet, cubs of tiger. (2) When a tigress is shot and her cubs are too young to provide for themselves, the cubs may be captured, but should not be killed. (3) The shooting of black buck (not does) is permitted from 1st December to the end of May, but the snaring and clubbing of these animals is strictly prohibited throughout the year.

No one shall kill small stags, the heads of which cannot be looked on as trophies; or do not exceed 24" for cheetal, 36" for sambhar, 15" for buck and 8" for chikara.

Horns and skins of big game shall not be sold at any time of the year. No one shall hunt, shoot, capture, sell or export any game during the close or breeding season, nor shall any animal be shot when going to or coming from water, or whilst in the act of drinking water at any tank, river, nullah or pool. The provisions of

Section 11 shall not apply to panthers, wild dogs, bears, man-eating tigers or any other man-eating animals nor preclude any person from adopting such measures as may be necessary for the protection of any human being. Panthers may be shot without restriction as to time and place outside any of the preserves referred to in Sections 4 and 5. Man-eating or habitual cattle-slaying tigers on their being proved to be such may be shot with the permission of the principal Revenue Officer of the district, or the Conservator of Forests, and the matter reported at once to the Minister through the Private Secretary.

No shooting passes of any kind shall be issued between the 1st July and 1st October, but officers shooting quail in season are prohibited from shooting them over dogs, as that disturbs the partridges, and other game during their breeding season. Passes to shoot small game shall not be issued to soldiers without giving one month's notice in writing to the Honourable the Resident. In granting these passes the rules herein laid down shall be strictly adhered to [R. B. Circular, (Political) No. 111 of 1903]. Shooting parties shall be limited to 2 guns each. Each gun shall be limited to 4 tigers, 4 bears, 2 sambhars, 2 spotted deer and 8 black buck. Other animals, the shooting of which is permissible under these regulations, may be shot without limit of number. In the event of one member of a party of two retiring, he cannot be replaced by another, nor can the balance of his bag be shot by the remaining member of the party. (1) The period of permission to shoot shall in no case exceed 3 months and no applications will be received for reserving the ground for any period

less than a month, except for the ten days at Christmas. (2) If a shooting party to which permission has been granted do not arrive on the ground within the first month of the period specified in the permit, all claims to that area shall be forfeited. If for any reason it is desired to have the period extended, fresh permission must be obtained but no extra fee shall be charged.

All applications for permission to shoot shall be disposed of on or about the 15th of November of each year. In the event of there being more than one application for the same area, the applicants shall cast lots at the house of the Minister's Private Secretary on a date of which due notice shall be given. (1) Applications for permission to shoot from officers outside His Highness' Dominions shall be forwarded to H. E. the Minister through his Private Secretary and shall state clearly (a) the name of the officer responsible and the names of the officers comprising the party; (b) date of departure to shooting camp; (c) number of horses, bullocks and other means of transport; (d) number of followers and the names of shikaris comprising the camp; (e) the line of country to be shot over; (f) the list of provisions required and their quantities. (2) Such applications will, however, not be considered until the claims of those residing in His Highness' Dominions have been met. When all the areas are apportioned off, a notice will be published in manner hereinafter provided, showing where each party is permitted to shoot. No application from non-officials will be entertained. (1) When an application for permission to shoot is allowed a permit shall be issued to the applicant, and a copy of the same

shall be forwarded by the Minister's Private Secretary to the Conservator of Forests, and the Inspector-General of Police. The Conservator of Forests, if he finds that the shooting areas, for which the passes have been granted, are situated in the Reserved Forest, shall forward copies of the rules prescribed for shooting in such forests to the applicants who shall be bound strictly to abide by them. (2) Shooting permits are not transferable, nor can any member of a party give up part of his authorized shooting to another. All permits must be returned to the Secretary on the completion of the shoot; together with a correct statement of all animals shot, with the measurements, and a short account of the shoot, with photos, if possible, for record and publication. The measurements of all animals shot, and the length of the horns of sambhar and cheetal must be correctly reported to the Committee, all measurements to be taken before skinning and horns to be measured straight from tip to base. In addition to the fee prescribed permit-holders shall pay O. S. Rs. 20 for each tiger or tigress shot and Rs. 100 for each cub under 3 years.

Supplies of grass or karbi, fowls, eggs, milk, ghee, gram or kulthi, dhal, atta, rice, goats and sheep will generally be provided by the district officials, on payment at the schedule rates which can be obtained from the tehsildar of the taluka or his assistant. Of these, however, only such articles as are obtainable locally will be supplied and payment for all supplies must be made *in cash on the spot*, and receipts taken from the Patel. (1) Permit-holders shall give due intimation of the number of beaters required to the nearest Revenue official to enable him to collect them from

adjoining villages. The beaters should be paid at the rate of four annas each per diem if big game is killed and at 2 annas per diem if the day is blank, or only small game is shot. (1) If beaters are collected at the camp on requisition and are not employed they should be paid one anna each. These payments should be made direct to the beaters and not through any one. (3) Permit-holders will be held responsible for the prompt payment of beaters strictly in accordance with the above rates, and on no account should payments be deferred till the following day. (1) Buffaloes required for *garas* should be previously purchased by the permit-holders outright, and should not be returned to the owners unless they agree to take them back, in such cases a small remuneration should be given to the owners. (2) The following are the approximate rates to be paid for *garas* :—2 years old, Rs. 6 ; 3 years old, Rs. 8 ; 4 years old, Rs. 9. (3) No *garas* over the age of 4 years should be purchased by permit-holders, as it entails hardship on the ryots who use them for agricultural and other purposes and as they are too big for the purpose required. Permit-holders and others entitled to shoot shall report in detail to the nearest Magistrate, or a Police Officer all accidents and injuries to shikaris, beaters, and others immediately after their occurrence and a copy of such report should be sent to the Private Secretary to the Minister.

(1) No shikaris will be allowed to be employed within His Highness' Dominions by any sportsman, unless he is registered and has taken out a license for the season. (2) An annual fee of O. S. Rs. 5 for big game and O. S. Rs. 2 for small game shall be

charged for each license. All licensed shikaris shall be supplied with badges by the Committee, which must be returned to the Honorary Secretary at the end of the season, by the party employing the shikaris. (3) Professional shikaris in cantonments shall take out licenses in accordance with the orders issued by the Honourable the Resident. Any permit-holder wishing to employ a village or local shikari shall, if he is not already registered, send the shikari's name and address at once to the Secretary to the Committee, to be registered and licensed. The ordinary rate of pay for shikaris is as follows :—For big game shikaris O. S. Rs. 15 to Rs. 30 p. m. ; for small game, Rs. 10 to Rs. 15 p. m. ; for village or local shikaris, Rs. 5 to Rs. 10 p. m.

Every person convicted before a Magistrate of any offence against these Regulations shall be liable to a fine which may extend to O. S. Rs. 100 and to Rs. 200 in case of a second conviction for the same offence. In addition to the penalty hereinbefore provided, His Highness' Government may prohibit the issue of *parwanas* to the offenders for a period of 2 years. If the offender is a British officer or a European British subject the case shall also be reported to the Honourable the Resident. Whoever kills, shoots or captures any game in His Highness' preserves without His Highness' permission or in the Government preserves without the Minister's permission, or in Jagir lands without permission of the Jagirdar, shall on conviction by a Magistrate, be liable to fine which may extend to O. S. Rs. 100 and to Rs. 200 in case of a second conviction for the same offence. Whoever on being demanded

refuses to give his correct name and address, or knowingly gives a wrong name and address, shall be punished with fine which may extend to O. S. Rs. 25 and to Rs. 50 on a second conviction for the same offence.

No reward shall be paid for killing tigers, panthers or bears, but a reward of O. S. Rs. 10 will be paid for the destruction of every wild dog. This reward will be paid at the nearest treasury after satisfactory proof and on the production of the skin under the orders of the tehsildar or other officer paying the reward.

Schedule of Big Game.

Name in English.	Name in Urdu.	Name in Mahratti.	Name in Telugu.	Season.
Tiger	<i>Sher</i> ..	<i>Vagha</i> ..	<i>Peddapuli.</i>	Shooting permitted in accordance with Rules from 1st March to 31st May.
Bear	<i>Reech</i> ..	<i>Asval</i> ..	<i>Guddaloogoo.</i>	
Blue Bull	<i>Nilgai</i> ..	<i>Rui</i> ..	<i>Manbothu.</i>	
Antelope	<i>Heron</i> ..	<i>Kalvit</i> ..	<i>Jinka or Ledri.</i>	
Chikara or Ravine deer ..	<i>Chikara</i> or <i>Phus-kura.</i>	....	<i>Guddi Jinka.</i>
The Rib-faced or Barking Deer	<i>Kaku</i> or <i>Jangli Bakru.</i>	<i>Bakru</i> ..	<i>Kukayori.</i>	

Schedule of Big Game—(contd.)

Name in English.	Name in Urdu.	Name in Mahratti.	Name in Telugu.	Season.
The Sambar ..	<i>Sambar</i> ..	<i>Sambar</i> ..	<i>Kannadiar Kati.</i>	For exceptions see Section 8.
The Spotted Deer ..	<i>Chital</i>	<i>Chitra</i> ..	<i>Dupi.</i>	
The Hog Deer ..	<i>Para</i> ..	<i>Paru</i> ..	<i>Kurupandi.</i>	
The Mouse Deer ..	<i>Pusure or Pisari</i>	<i>Pisara</i> ..	<i>Ditta.</i>	

Schedule of Small Game.

Name in English.	Name in Urdu.	Name in Mahratti.	Name in Telugu.	Close Season.
Hare ..	<i>Khargoshe</i> ..	<i>Sasa</i> ..	<i>Kandail</i> ..	1st June to 30th September.
The Bustard ..	<i>Tokdar Kara-</i> <i>donk Hoomh.</i>	<i>Maldhonk</i> ..	<i>Batmika</i> ..	
The Florican ..	<i>Tun Mor or</i> <i>Charas.</i>	<i>Tun Mor</i> ..	<i>Mala Namili</i> ..	

Schedule of Small Game—(contd.)

Name in English.	Name in Urdu.	Name in Maharatti.	Name in Telugu.	Close Season.
The Peafowl ..	<i>Mor</i> ..	<i>More</i> (Male), <i>Landori</i> (Female) ..	<i>Namili</i> ..	1st June to 30th September.
The Painted Partridge ..	<i>Kala Titar</i> ..	<i>Kala Titar</i> ..	<i>Kakada Kodi</i> or <i>Kamrupilla</i> ..	
The Painted Sand-grouse	<i>Pahari Bar Titar</i>	<i>Pokandi</i> ..	<i>Wajrika</i> or <i>Jam</i> <i>Polanki</i> ..	
The common Sand- grouse ..	<i>Bar Titar</i>	<i>Kajirka</i> ..	1st March to 30th Septem- ber.
The Grey Jungle fowl ..	<i>Jangli Murgli</i> ..	<i>Kambadi</i> ..	<i>Adni Kodi</i> ..	
The Red Jungle fowl ..	....	....	....
The Painted Spur-fowl..	<i>Choti Jangli</i> <i>Murgli</i> ..	<i>Kastur</i> ..	<i>Chitta Kambadi</i> ..	
The Red Spur-fowl	1st March to 30th September.
The Grey Partridge ..	<i>Titar</i> ..	<i>Titar</i> ..	....
Teal and Duck of all kinds,	1st May to 31st August.

MOUNT ABU.

The following are among the rules for the protection of game in Abu and its slopes outside the area leased to the British Government :—

1. The breeding season of wild birds, including partridges of all kinds, jungle fowl and spur-fowl, shall extend from the 15th March to 15th September inclusive in each year. 2. The breeding season of "animals of game" including sambhar, cheetal, four-horned antelope and hare, shall extend from the 1st April to the 31st October inclusive in each year. 3. During the breeding season as above defined, the shooting of wild birds or "animals of game," their destruction by nets or other means, or taking the eggs of such birds shall be absolutely prohibited. During the breeding season, moreover, no one shall possess or sell within Abu limits outside the leased area any wild bird or "animal of game" recently killed or taken or imported into Abu, or the plumage of any wild bird, or the fur, horns, or skin of any "animal of game" which has been recently killed. Provided that this prohibition shall not extend to wild birds or "animals of game" proved to be possessed, or to have been sold, as pets. 4. The destruction of does, peafowl and blue-pigeons is absolutely prohibited at all times of the year. 5. The netting, trapping or ensnaring of wild birds or "animals of game," is prohibited throughout the year. 6. No person shall catch, trap, snare or shoot any game, destroy by nets or other means or take

eggs of birds unless he has obtained a non-transferable license which shall be granted as follows :—

(1) Any European officer wishing to shoot big game or small game on Mount Abu, the limits of which are the group of hills known as Mount Abu outside the leased area with their slopes on all sides must obtain a license through the Magistrate of Abu, from the State Tehsildar at Delwara, who is authorized by the Darbar to grant such application. Should the Tehsildar consider it desirable to refuse the grant of or withdraw a license he would make a reference to the Darbar and acquaint the Magistrate of Abu with the Darbar's decision in every case.

(2) License to Indian Princes and others shall be granted at the discretion of the Sirohi Darbar to whom applications should be sent direct by the applicants.

(3) Licenses will be obtainable on payment of the fees noted below :—

	Period.	Amount of fees.
		Rs.
i. License for shooting wild birds and hare .. ..	.. 1 month ..	5
(not within the breeding season)		
ii. License for shooting wild birds and hare .. ..	.. 2 months ..	10
(not within the breeding season)		

	Period.	Amount of fees, Rs.
iii. (a) License for shooting of game including tiger and bear.	For any period exclusive of breeding season as defined in Rules 1—3 above between April 1st of one year and March 31st of the following year.	25
(b) Wild birds and hare iv. Tiger and bear		

Not more than four head of four-footed game may be shot during a whole year. A breach of this rule will entail the immediate cancellation of the offender's license and permission shall not again be accorded him to shoot within the Raj limits. No shikari shall go round and find out game for any license-holder unless he is in possession of a permit in that behalf to be obtained by the license-holder from the Tehsildar of Abu. Any person convicted of a breach of Rules 3, 4, 5 and 8, shall be liable to a fine which may extend, in the case of first offence, to a sum of not more than Rs. 25 or, in default, to simple imprisonment for a term not exceeding 14 days; and, in the case of a second or of any subsequent offence, to a fine of not more than Rs. 50 or in default to simple imprisonment for a term not exceeding one month. Any person who commits breach of Rule 6 in the above specified area shall, on conviction by the Resident. Western Rajputana States in the case of European British subjects, by His Highness himself in the case of Ruling Princes and by the Tehsildar of Sirohi in the case of others, be liable in the case of a

first offence to a fine not exceeding Rs. 25 or, in default, to simple imprisonment not exceeding one month or both and, for every subsequent offence, to a fine not exceeding Rs. 50 or in default to a term of simple imprisonment not exceeding two months, or both, together with forfeiture of any gun found in the offender's possession.

Abu Leased Area.

Rules for the protection of game in Abu Leased Area :—

1. Killing of all game birds and animals in the Leased Area is absolutely prohibited with the exception of panther, bear and pig. *Note.*—Game birds include peafowl and blue-pigeon. 2. Killing of panther, bear and pig is prohibited except under a license issued by the Magistrate. 3. Such license will be issued on payment of a fee of Rs. 10 to any person not holding a game license from Sirohi State, and free to persons holding game licenses issued by Sirohi State at the discretion of the Magistrate and subject to the following conditions :—(i) The period of license shall be from 1st April to 31st March inclusive, or if issued free of charge shall be the same as the period of the Sirohi State license, provided that it shall not in any case extend beyond the 31st March next following. (ii) The license-holder shall report within one week to the Magistrate the killing of any animal under the license. (iii) If an animal wounded within the Leased Area passes into Sirohi State territory, it shall not be pursued by persons holding only an Abu Leased Area license except with the

written permission of the Magistrate. (iv) The license-holder shall report immediately to the Magistrate any injury received by any of his party in the pursuit of game, or caused by himself or any of his party to any human beings or to any bullock or cow. (v) The tying of bullocks or cows for panther is prohibited. (vi) The setting of any kind of spring gun, snare, trap, or pitfall is prohibited. 4. Any person breaking any of the above rules shall be liable to a fine not exceeding Rs. 50, cancellation of his license, and forfeiture of any weapons used and of the skins and heads of any animals killed by him at the time of committing such breach.

MYSORE.

Regulation No. II of 1901, 8th day of April, 1901. A Regulation to prevent the indiscriminate destruction of Wild Animals and Birds, and to provide for the Protection of Game and Fish in Mysore.

Preamble!—Whereas it is expedient to prevent the indiscriminate destruction of wild animals and birds, and to provide generally for the protection of game and fish in Mysore, Her Highness the Maharani-Regent is pleased to enact as follows:—

1. *Short title extent and commencement.*—(1) This Regulation may be called the “Mysore Game and Fish Preservation Regulation, 1901.”

(2) It shall extend to such local areas as may from time to time be specified by Government by notification in the *Official Gazette*.

(3) And it shall come into force at the end of six months from the date of its publication in the *Official Gazette*.

2. In this Regulation, "game" means antelope, ibex, jungle-sheep, sambhar and all other descriptions of deer, bison, hares, jungle fowl, spur-fowl, peafowl, partridge, grouse, quail, wood-cock, bustard, florican, duck and teal, and shall include such other animals and birds as the Government of Mysore, may, by notification in the *Official Gazette*, declare to be game.

3. *Absolute protection of particular classes other than "game."*—The Government of Mysore, may, from time to time, by notification in the *Official Gazette*, prohibit absolutely the killing or capture of any specified kinds of animals or birds, the killing or capture of which the Government may consider unsportsmanlike or otherwise inexpedient, provided that such animals or birds do not come under the definition of "game" for the time being in force.

4. *Limited protection of particular classes killed for commercial purposes.*—Whenever the Government of Mysore has reason to believe that any particular kinds of wild animals or birds, whether included in the definition of "game" or not, are being largely destroyed for the sake of their skins, horns or plumage

for commercial or other purposes, it may, by notification in the *Official Gazette*—

(a) prohibit the killing or capture of such particular kinds except under and in accordance with the conditions of a license; granted by such officer and in such form as the Government may prescribe in this behalf; and

(b) prohibit the killing or capture of such particular kinds either during a defined period of time, or within a defined area, or both.

5. *Regulation of fishing.*—(1) The Government of Mysore, may, from time to time, by notification in the *Official Gazette*, make rules for the regulation and control of fishing in any stream or lake, and may, from time to time, amend or cancel any rule so made.

(2) Rules under this section may, among other matters, prohibit the poisoning of the water of any stream or lake, and prohibit or regulate the placing or throwing of any explosive or deleterious substance therein, and the use, for the capture of fish of fixed engines and nets of a mesh below a certain size.

6. *Close season and protection of game and fish.*—The Government of Mysore, may, from time to time, by notification in the *Official Gazette*—

(1) fix a season or seasons in every year during which it shall not be lawful for any person within any specified local area to kill or capture, or attempt to kill or capture, game or fish of any specified kind;

(2) prohibit altogether, for, any period not exceeding five years, within any specified local area, the killing or capture of game or fish of any specified kind;

(3) prohibit absolutely the killing or capture of the mature females or immature males or females of any specified kinds of game, or the taking out or destruction of the eggs of game birds;

(4) prohibit or regulate the setting of nets, snares, traps, or spring-guns, the laying of poisons or poisonous ingredients or preparations, or the digging of pits, to entrap or kill game or any specified kinds of game;

(5) regulate or prohibit, except under, and in accordance with the conditions of a license granted as provided by rules to be framed by the Government, the capture and killing of game or of any specified kinds of game; and may, from time to time, amend or cancel such notification.

Provided that no such notification shall have effect until one month from the date of its first publication in the *Official Gazette*.

7. *Rules about the sale of game and fish.*—The Government of Mysore, may, from time to time, by notification in the *Official Gazette*, make rules regulating the sale of game and fish within any specified local area.

8. *Penalty for certain offences.*—Any person who wilfully kills, captures or sells or attempts to kill, capture or sell, any animal, bird, game or fish or does any other

act, in contravention of this Regulation, or of any rules or notification under this Regulation, or in contravention of any condition contained in a license granted under this Regulation or under the rules made thereunder, shall be liable on conviction to a fine not exceeding one hundred rupees.

9. *Disposal of killed or captured game or fish, or weapons, etc., belonging to offender convicted under Section 8.*—When any person is convicted of an offence punishable under this Regulation, the convicting Court or Magistrate may direct that the whole or any portion of any animal, bird, game or fish, killed or captured by such persons and of all weapons, implements and dogs used in and for the purpose of aiding the commission of such offence, shall be confiscated, and any license granted under this Regulation to such person may be cancelled by the officer who granted such license.

10. *Fees, fines, etc., realized under Regulation. Rewards to informants.*—Subject to such rules as the Government of Mysore, may, from time to time prescribe, all fees and fines levied, and sums realized by the sale of property confiscated under this Regulation, shall be paid into the public treasury. But the convicting Court or Magistrate may award to any person or persons on whose information the conviction was obtained, the whole or any portion of any fine imposed or of any sum realized as aforesaid.

11. *Power to Forest and other officers to make arrests of offenders under this Regulation.*—Any Forest Officer and any other officer or person empowered in this

behalf by the Government of Mysore or by a subordinate Revenue authority to which the Government may have delegated its authority for the purpose, may arrest without a warrant any person who commits in his view any offence punishable under this Regulation or the rules thereunder, and who, on demand, refuses to give his name and address, or gives a name and address which there is reason to believe is false.

12. *Exception.*—Nothing in this Regulation shall be deemed to prevent any owner or occupier of land from killing, capturing or pursuing game doing damage to any crop growing thereon, so far as the same may be necessary for the protection of the crop.

Rules under the Mysore Game and Fish Preservation Regulation (II of 1901), published with Notification No. 9007—Legis. 56, dated Bangalore, 11th December, 1901, and amended from time to time.

I. With reference to Sub-section (2) of Section 1 of the Mysore Game and Fish Preservation Regulation (II of 1901), it is hereby notified that the local area to which the Regulation extends shall comprise all the districts in the Mysore State.

II. 1. In exercise of the powers conferred by the said Regulation (II of 1901), the Government of Mysore are further pleased to prescribe the following rules,

which shall come into force throughout the State on the first day of February 1902 :--

Provided that, as regards State Forests, and lands specially protected under Section 35 of the Mysore Forest Regulation (XI of 1900) the operation of these rules shall be subject to the provisions of the said Forest Regulation and the rules, if any, framed thereunder.

2. The killing of monkeys, brahmin-kites, parrots and birds of song is absolutely prohibited.

Provided that any owner or occupier of land may kill (as well as capture or pursue) monkeys or parrots doing damage to fruit or other crop growing thereon, so far as the same may be necessary for the protection of the crop.

3. (1) The killing or capture of birds with bright coloured plumage, of peafowl and antelope, is prohibited for a further period ending with the 30th June, 1922.

The killing or capture of antelope is prohibited for a period of 5 years absolutely in the District of Mysore, Bangalore, Kadur and Hassan and subject to the provision in paragraph 2 of the rule in the other districts.

(2) The District Magistrate may, on the application of the holder of a game license under these rules, grant written permission to such holder to shoot, within

the year for which the license was granted, only one mature bison, antelope with horns not less than 15 inches long. A report of the antelope shot shall be furnished to the District Magistrate by the license-holder without unreasonable delay.

4. The following acts in respect of any stream or lake (i.e., tank), with a view to the capture or destruction of fish are forbidden, that is to say,—the poisoning of water, the placing or throwing of dynamite or other explosive or deleterious substance in water, the setting of fixed engines, and the use of nets having a mesh below two inches in the case of perennial streams and three-fourths of an inch in other cases.

5. Deputy Commissioners are authorized to declare, from time to time, by notification in Part II of the *Mysore Gazette*, all or any streams or lakes or any portion of the same to be closed against fishing during any year or part of a year or during the spawning season, and in like manner to prohibit, for like periods, the capture or destruction of any particular species of fish therein.

Explanation.—The spawning season is as follows :—

As regards streams running to the West Coast—from 1st March to 31st August ;
as regards streams running to the East Coast—from 1st May to 30th November ;
in other cases—from 1st June to 31st December, both days inclusive.

6. It shall not be lawful for any person to kill—

- (a) Hares, or any description of feathered game other than migratory birds (i.e., other than duck and teal), between the 1st of March and the 1st of September in any year ;
- (b) Duck or teal, between the 1st of May and the 1st of October in any year ;
- (c) The females, whether mature or otherwise, or the immature males of bison, sambhar, antelope, ibex, or any variety of deer, at any time of the year ;
- (d) Any mature male sambhar or spotted deer, if it is hornless or its horns are in velvet ;
- (e) Any other game, between the 15th of June and the 15th of October in any year.

7. The taking out or destruction of the eggs of game-birds is absolutely prohibited.

8. (a) No person shall sell or expose for sale any kind of game during the close season prescribed in these rules.

(b) Deputy Commissioners are authorized to prohibit the sale of fish in the neighbourhood of any stream or lake, or portion thereof, closed against fishing under

Rule 5, or the sale in such neighbourhood of any species of fish of which the capture or killing may have been prohibited under that rule :

Provided that nothing herein shall apply to fish which the person selling or attempting to sell the same can prove to have been caught in some place where its capture was not unlawful.

(c) It shall not be lawful for any person to sell game or fish at any time within the limits of any Municipality unless he shall have obtained a license in this behalf from the President or Vice-President of the Municipality, on payment of a fee of 4 annas, such license being renewable at the end of every year on payment of a like fee.

9. Except to the extent permitted under Section 12 of the Regulation, no person shall shoot at and kill game, or attempt so to do, without a license in the form appended to these rules, to be obtained from the Magistrate of the District or Subdivisional Magistrate on payment of a fee of Rs. 5. The District Magistrate or the Subdivisional Magistrate shall be at liberty either to grant or to refuse to grant a license ; if satisfied that the conditions of a license have not been complied with, whether wholly or in part, to withdraw or cancel the same at any time.

Exception.—The following classes of officers, when travelling on Government duty in their respective jurisdiction are exempted from taking out a license and may stalk or track game in any forest open for shooting, obtaining a permit from the Conservator of Forests in Mysore, or from any officer authorized by him in this

behalf. They should not beat or drive and shall observe the close seasons and other restrictions under the rules. (1) All Heads of Departments ; (2) All Deputy Commissioners and District Magistrates of Districts ; (3) Gazetted Forest Officers ; and (4) Gazetted Police Officers.

10. A license granted under the preceding rule shall cover only the individual in whose name it was issued, and shall not be transferable to any other person. It shall be available only till the expiration of the calendar year for which it was granted ; but it may be renewed, previous to such expiration, on payment of a second fee.

The operation of such license may be extended—

(a) To any State Forests, or land specially protected under Section 35 of the Mysore Forest Regulation, comprised within the district for which the license was granted on payment of an additional fee of Rs. 10 and on counter-signature by the Conservator of Forests ;

(b) To all State Forests and lands specially protected as aforesaid wherever situated, or to the whole of the Mysore State generally, on payment of a fee of Rs. 20 in addition to the initial fee of Rs. 5, and on counter-signature by the Conservator of Forests in the case of State Forests and lands specially protected as aforesaid, and in the case of other localities by the Inspector-General of Police or other officer authorized in this regard by the Government ; and

(c) To any district or districts other than the one for which the license was granted, on payment of a fee of Rs. 5, for each additional district in addition to the initial fee of Rs. 5, and on counter-signature by the District Magistrate or Magistrates concerned :

Provided that nothing in this paragraph applies to a State Forest or other Forest or land at the disposal of Government constituted as game preserved by a notification in this behalf.

10 A. When a license granted in accordance with these rules is lost or accidentally destroyed, a duplicate may be granted to the licensee on payment of a fee of 4 annas in the case of licenses under Rule 8 (c), and of one rupee in all other cases.

The whole of the Shimoga and Kadir Districts ; the Hassan Taluk (including Abur Sub-Taluk), and the Manjarabad and Belur Taluks of the Hassan District, and the Heggaddevankote, Hunsur, Chamrajnagar and Gundlupet Taluks of the Mysore District.

10 B. Notwithstanding anything contained in Rules 9 and 10, the District Magistrate may grant to an owner or occupier of land in any of the tracts specified above a license to pursue, shoot at and kill game on payment of reduced fee of Rs. 2, which shall have operation over such portion of the District and State Forests and lands specially protected under Section 35 of the Mysore Forest Regulation, as lies within the limits of the Hobli in which the licensee resides.

If the Hobli within the limits of which the licensee resides adjoins another district, the operation of such license may be extended, without payment of any additional fee, to any specified portion of such adjoining district, State Forest and land specially protected as aforesaid, situated therein, on counter-signature by the District Magistrate of such district.

It shall be competent to the District Magistrate granting a license under this rule to withdraw or cancel the same at any time for sufficient cause.

10 C. (a) The aggregate of game of the following species allowed to be killed by any one person holding a license under these rules during the calendar year for which the license is granted shall not exceed—(1) two bison; (2) four cheetal; (3) two sambhar, and (4) two barking deer or muntjac.

These restrictions shall be in force for a period of 5 years from the date of this notification.

(b) License-holders shall not enter any forest without previously giving notice to the local forest official of their intention to shoot therein.

Note.—A bison, cheetal, sambhar, or barking deer once wounded counts towards the above limit whether brought to bag or not.

10 D. The holder of the license granted either under Game Rules or Arms Regulation for the protection of crop and self-defence, shall not sit up over water or over salt-licks for the purpose of shooting any animal other than *carnivora*.

10 E. The holder of a license shall camp only on such regular camping grounds in the forest as may have been set apart by forest authorities, or in places specially pointed out to him by a forest officer.

11. The power to arrest offenders under the circumstances referred to in Section 11 of the Regulation (i.e., where the offence is committed in the view of the person making the arrest, and the offender on demand refuses to give his name and address or gives a name and address which there is reason to believe is false) may be exercised by the following persons, namely :—

All Forest officers including Forest Guards, Game Supervisors and Game Watchers; all Police officers including constables; and all officers of the Revenue Department (including land revenue, excise, sayer, etc.), of or above the rank of patel or shanbhog.

12. Any persons holding a license granted under these rules shall be bound to produce the same when called upon to do so by Magistrate or by any of the persons enumerated in the preceding rule, and to deliver up the license at the end of the calendar year for which the license is granted, to the authority empowered to grant the license or to the nearest Forest or Police officer of or above the rank of a Forest Ranger or a Police Inspector as the case may be.

13. Any breach of the above rules will render the offender liable on conviction to the penalty provided in Section 8 of the Regulation, namely, fine not exceeding one hundred rupees.

(Counterfoil.)

[To be retained by the issuing
officer.]

FORM OF LICENSE.

LICENSE.

License for the pursuit of game.

Permission is granted to.....
to pursue game in the.....
District during the calendar year
ending the 31st December, 19 ,
subject to the provisions of the
Mysore Game and Fish Preserva-
tion Regulation, 1901, and of the
rules thereunder and to all local
rules in force under the authority
of the Deputy Commissioner.
.....19 .

For the pursuit of game.

Permission is granted to.....to pursue game
in theDistrict during the calendar year
ending the 31st December, 19 , subject to the provi-
sions of the Mysore Game and Fish Preservation
Regulation, 1901, and of the rules thereunder (which
are printed below for reference) and to all local rules
in force under the authority of the Deputy Com-
missioner.

*District Magistrate.**District Magistrate.*

.....19 .

(Here print the rules and continue, if necessary, on the reverse.)

ORISSA FEUDATORY STATES.

The game regulations in force in the Orissa Feudatory States are not uniform. There are 26 States and these have different rules and regulations many of which are not published.

The general rule is that no *shikar* can be had in a State without the permission of its Chief. If that permission is given, then such license fees as are in force in the State must be paid. To bring a rifle or a gun into a State an import license must be obtained from the Political Agent, and a license for a gun within the State must be obtained from the Chief on payment of the fees in force.

THE PUNJAB.

Notification No. 76. The 7th May, 1891.—In supersession of Notification No. 208, dated 2nd May, 1879, the Lieutenant-Governor is pleased to prescribe the following rules under clause (i) of Section 25 and clause (j) of Section 31, of the Indian Forest Act, 1878 (VII of 1878), regarding hunting, shooting fishing, the

poisoning of water, and the setting of traps and snares in reserved and protected forests.

Rules.

Amended by Notification No. 2513 (Forests), dated 5th February, 1917.

I.—The setting of snares and traps, the use of small mesh nets to catch, or of dynamite to destroy fish, and the poisoning of water, are prohibited.

II.—Hunting or shooting with elephants and with large parties of beaters is prohibited.

III.—The Conservator of Forests may declare or publicly notify any reserved or protected forests or portion of such forest to be altogether closed against hunting, shooting and fishing for such periods as may be necessary when it is desirable in his judgment so to close such forest or portion of a forest.

The following rules to regulate the shooting, trapping or killing in any way of Oorial in reserved and protected forests in the Attock, Jhelum, Shahpur and Mianwali districts.

Rules.

1. The shooting, trapping or killing in any way of Oorial is absolutely prohibited between September 1st and October 14th, inclusive, and at all other times except

under license to be granted on payment of a fee of Rs. 20 by the Deputy Commissioner of the district concerned, provided that the Deputy Commissioner may delegate authority to grant licenses to the Forest Officer of the division.

2. The following rules will govern the issue of licenses :—

(a) Licenses will be of two kinds, viz. :—(1) A license granted for a period of 10 days on payment of a fee of Rs. 20 for the shooting of 4 male oorial. Not more than one such license will ordinarily be granted to one person in one shooting season. (2) A license granted for a period of 7 days on payment of a fee of Rs. 10 for the shooting of 2 male oorial. Not more than 2 such licenses will ordinarily be granted to one person in one shooting season. (b) The holder of a shooting license may be required to shoot one old ewe for every male oorial shot or irrecoverably wounded. (c) No male oorial having horns less than 23 inches in length may be shot. (d) An application for a license will not be considered more than one month before the date on which the license is required. (e) All licenses are issued subject to the conditions printed therein. (f) In the absence of any future notice which may be issued by the Conservator of Forests, Punjab, persons requiring licenses should apply to the Deputy Commissioner of the District concerned.

3. The total number of oorial which may be shot in any district during each shooting season will be settled by the Conservator of Forests, Punjab, in consultation with the local officers.

4. Gazetted officers serving the Punjab Government when on tour within their districts may shoot without obtaining a license provided that—(1) they do not visit any block at the time when it has been assigned to another Licensee; (2) they are bound by the shooting rules in all other respects.

5. Deputy Commissioners of the Districts specified may exempt individual land-holders in the possession of Arms licenses from the operation of these Rules.

Extract from Punjab Government Notification No. 15935, dated 28th August, 1918.

No. 15935—Notification.—In exercise of the power conferred by Section 3 of the "Wild Birds and Animals Act," 1912, and in addition to so much of Punjab Government Notification No. 1390-S., dated 5th September, 1916, as relates to Antelope cervicapra and Gazella bennetti, the Lieutenant-Governor is pleased to declare the time specified in column IV of the schedule hereto appended to be close time in the Gurgaon District for the Wild Animals shown in the first three columns of the said schedule opposite to the time. The notification will remain in effect for a period of 2 years from the date of publication.

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period.
1	<i>Antelope cervi-capra.</i>	Indian Antelope or Black Buck.	<i>Hiran, haran, kala hiran, mirg, modine, kalhra.</i>	Both males and females whole year.
2	<i>Gazella bennetti</i>	Indian Gazelle or Ravine Deer.	<i>Chinkara, chikara, kal-punch, ask ahu, ratta, gora hiran, chitka hiran, chhatika.</i>	Ditto.

Extract from Punjab Government Notification No. 10885, dated 30th April, 1917.

No. 10885-Notification.—Under the provisions of Section 25, clause (i), Section 31, clause (j), and Section 75, clause (d), of the Indian Forest Act, 1878, the Lieutenant-Governor is pleased to make the following amendment in the rules to regulate the shooting, trapping, or killing in any way of Oorial in reserved or protected forests in the Attock, Jhelum, Shahpur and Mianwali districts,

which were published in Punjab Government Notification No. 1394-S., dated 5th September, 1916 :—

Amendment.

In Rule 1 for "September 16th and March 14th," read "September 1st and November 30th."

Notification No. 1390-S.—In exercise of the powers conferred by Section 3 of the "Wild Birds and Animals Protection Act," 1912, and in supersession of Punjab Government Notification No. 368, dated 6th August, 1914, the Lieutenant-Governor is pleased to declare the time or season specified in column IV of the schedule hereto appended to be a close time in the Punjab for the wild birds and animals shown in the first three columns of the said schedule opposite to such time or season :—

SCHEDULE.

Amended by Notification No. 2511, dated 5th February, 1917.

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period.

Mammals.

1	<i>Ovis hodgsoni</i> ..	The Great (Tibetan sheep, misnamed <i>Ovis</i> <i>Ammon</i>).	<i>Nian</i>	Both females and males, the whole year, except in accordance with the rules published in Punjab Govern- ment Notifications No. 1392-S (Forests) and No. 1394-S (Forests), dated 5th September, 1926.
2	<i>Ovis vignei</i> ..	Urrial ..	<i>Oorial, huriyal, sha, koh-i- dumba, koch, gad, garund.</i>	
3	<i>Ovis nahura</i> ..	Bharal or Blue Wild Sheep.	<i>Miatu, bharal, bhard, warr.</i>	
4	<i>Capra sibirica</i> ..	The Himalayan Ibex.	<i>Trangol, katrol, tangrol, kin.</i>	

SCHEDULE--(contd.)

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period.
<i>Mammals--(contd.).</i>				
5	<i>Hemitragus jemlaicus.</i>	Thar ..	<i>Tahr, thiar, sho, meshi, mehi, sbi, karth, korth, kart.</i>	Females, the whole year, males, the whole year, except in accordance with the rules published in Punjab Government Notifications No. 1392-S (Forests) and No. 1394-S (Forests) dated 5th September, 1916.
6	<i>Nemorhædus bubalinus.</i>	Serow, or Himalayan Goat-antelope.	<i>Goa, yamu, emru, aimu, sarao, jangal.</i>	
7	<i>Cemas goral</i>	Goral ..	<i>Pij, ban-bakri, ghorrur, gurrur, ghoral, ghurral, gudh, ghurd, sar.</i>	
8	<i>Pantholops hodgsoni.</i>	Tibetan Antelope.	<i>Tsus, chus, chiru, chuhu..</i>	
9	<i>Gazella picticaudata.</i>	Tibetan Gazelle	<i>Goa, ragao</i>	
10	<i>Moschus moschiferus.</i>	The Musk Deer ..	<i>Kastura, raunsa, bina, bijri, rochh, raonwi, ranuwin.</i>	

SCHEDULE—(contd.)

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period.
<i>Mammals—(contd.).</i>				
11	<i>Boselaphus tragocamelus.</i>	Nilgai or Blue Bull.	<i>Nilgao, Nilgai, kilgai, bangai, ruujh, gond, hain.</i>	1st April—15th September.
12	<i>Tetracerus quadricornis.</i>	Four-horned Antelope.	<i>Chausingha, chauha, deda.</i>	Females, whole year; males 1st April—15th October.
13	<i>Antelope cervicapra.</i>	Indian Antelope or Black Buck.	<i>Hiran, haran, kulu hiran, mirg, moduin, kalhra.</i>	15th January—5th April.
14	<i>Gazella bonneti</i>	Indian Gazelle or Ravine Deer.	<i>Chinkara, chikara, kal-punch, ask, aku, ratta, gora hiran, chilka hiran, chhatika.</i>	Females, whole year; males 1st April—15th September.
15	<i>Corvus muntjac.</i>	The Barking Deer.	<i>Kakar or kakkar ..</i>	Females, whole year; males 1st January—31st March.
16	<i>Corvus duvaucii.</i>	The Barasingh	<i>Bara singha ..</i>	15th September—31st December.

· SCHEDULE—(contd.)

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period.
<i>Mammals—(contd.).</i>				
17	<i>Cervus unicolor</i>	The Sambhar ..	<i>Sambar, samar, sambhar..</i>	15th September—31st December.
18	<i>Cervus axis</i> ..	The Spotted Deer.	<i>Chital, chital, chitra, jhank, pagal hiran, charhu hiran.</i>	Ditto.
19	<i>Cervus porcinus</i> .	The Hog Deer ..	<i>Para, pahra, parha</i> ..	15th August—15th No- vember.
20	<i>Lepus ruficauda- tus</i> .	The Common Indian Hare.	<i>Khargosh, seru, pharru, susya, sassu, susa, sasa, saiha, selu, saiyah, sahu.</i>	1st April—15th Septem- ber.
21	<i>Lepus dayanus</i> ..	The Sind Hare ..	<i>Ditto</i> ..	Ditto.
22	<i>Lepus hypsibius</i>	The Upland Hare.	<i>Ditto</i> ..	Ditto.
23	<i>Equus hemionus</i>	The Wild Ass ..	<i>Ghor-khar, ghur, ghuran, jangli khola.</i>	Ditto.

SCHEDULE—(contd.)

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period.

Mammals—(concl'd.).

24	<i>Ursus arctus</i> ..	The Red Bear, or Snow Bear.	<i>Brakho, lagru, rotha bhalu, rata bahu, bhird, shaham, lal bhalu, lal richh.</i>	Females with cubs at foot and cubs, the whole year; others 1st July—30th Septem- ber.
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Birds.

25	<i>Upupa epops</i> ..	European Hoopoe.	<i>Hudhud, faqir, thok barhiya, killi turkhan, chiri turkhan, badhi, chakki raha, ububera, nuphuphora, khatichira, kauthungpia, nora pakhi.</i>	The whole year.
26	<i>Upupa indica</i> ..	Indian Hoopoe	<i>Ditto</i> ..	<i>Ditto.</i>

SCHEDULE—(contd.)

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period.
<i>Birds—(contd.).</i>				
27	<i>Oriolus Kandoo</i>	Indian Oriole ..	<i>Pakkau, path khora, sodu chiri, hariawal, pilak.</i>	The whole year.
28	<i>Oriolus melano- cephalus.</i>	Indian Black- headed Oriole.	<i>Ditto</i> ..	<i>Ditto.</i>
29	<i>Oriolus traillii</i> ..	The Maroon Oriole.	<i>Ditto</i> ..	<i>Ditto.</i>
30	<i>Coracias indica</i>	Indian Roller, or Blue Jay.	<i>Nilkant, nilkans, garrar, lilaran, nilaran, lalaran, chanchan, nil chaha, matab, garponk, garrar bhagwan, chunk.</i>	<i>Ditto.</i>
31	<i>Coracias garrula</i>	European Roller.	<i>Ditto</i> ..	<i>Ditto.</i>
32	<i>Ceryle varia</i> ..	Indian Pied King-fisher.	<i>Koryala, kilkila, toba, toka, machku, kinai, tathua, machhimar.</i>	<i>Ditto.</i>

SCHEDULE—(contd.)

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period.

Birds—(contd.).

33	<i>Ceryle lugubris.</i>	Himalayan Pied King-fisher.	<i>Jal kugh, jal patar, jal butera, machhlara, machhimar.</i>	The whole year.
34	<i>Alcedo ispida</i> ..	Common King-fisher.	<i>Chota kirkila, toba, machhiyang, nari, machhimar, fatihra.</i>	Ditto.
35	<i>Halcyon smyrnensis.</i>	White-breasted King-fisher.	<i>Kirkila, kala machrala, chota kirkila, kahera bagla, machhimar.</i>	Ditto.
36	<i>Ardea manilensis.</i>	Eastern Purple Heron.	<i>Nai, lalsain, lal anjan, bilai, sambaz, lalbagla, surkhra, landhing, nari.</i>	Ditto.
37	<i>Ardea cinerea</i> ..	The Common Heron.	<i>Nai, sain, anjan, bilai, sambaz, sank, nari, neri.</i>	Ditto.

SCHEDULE—(contd.)

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period.
<i>Birds—(contd.).</i>				
38	<i>Herodias alba</i> ..	The Large Egret.	<i>Mallang bagla, torra bagla, tar bagla, baru bagla, bara safed bagla, kilcha, bara kilcha, bari bulahi, zard nok bulahi.</i>	The whole year.
39	<i>Herodias intermedia.</i>	The Smaller Egret.	<i>Pantangku bagla, patokha bagla, karchia bagla, choti bulahi, koratun bulahi, ooungri bulahi, dupphiwala bagla.</i>	Ditto.
40	<i>Herodias garzetta.</i>	The Little Egret.	<i>Kilchia bagla, karchia bagla, chor bagla, nikka bagla.</i>	Ditto.
41	<i>Buhuleus coromandus.</i>	The Cattle Egret.	<i>Surkhia bagla, badami bagla, dorvi bagla, gai bagla, hirank, bagga bagla.</i>	Ditto.

SCHEDULE—(contd.)

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period.
<i>Birds—(contd.).</i>				
42	<i>Ardeola grayi</i> ..	The Pond Heron.	<i>Bagla, andha bagla, chamu bagla, chapran-wala bagla, bag.</i>	The whole year.
43	<i>Butorides javanica</i> .	The Little Green Heron.	<i>Kancha bagla, kilcha, bara kilcha, chimta, surkh bagla, chechon bagla.</i>	Ditto.
44	<i>Nycticorax griseus</i> .	The Night Heron.	<i>Jar bagla, wak, kokrai, hawank.</i>	Ditto.
45	<i>Phœnicopterus roseus</i> .	The Common Flamingo.	<i>Dog-hans, raj-hans, mangi, raj-bagla, kala lala, sippihhan, safed balakh.</i>	Ditto.
46	<i>Crocopus phœnicopterus</i> .	The Bengal Green Pigeon.	<i>Kandel, harrial, kokla, nilsar, latta.</i>	1st March—15th September.
47	<i>Crocopus chlorogaster</i> .	The Southern Green Pigeon.	<i>Harrial, latta</i> ..	Ditto.

SCHEDULE—(contd.)

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period.

Birds—(contd.).

48	<i>Sphenocercus sphenurus.</i>	The Kokla Green Pigeon.	Kokla, gugu, latta, ghuggi.	1st March—15th September.
49	<i>Columba leucophaea.</i>	The White-bellied Pigeon or Snow Pigeon.	Bhusli, budhri, bhujri, rapia, charan, luku, kamlowa, gorian, gugu, duund kabutar.	Ditto.
50	<i>Dendrocygna hodgsoni.</i>	The Speckled Wood-pigeon.	Kamlowia, chittal kabutar.	Ditto.
51	<i>Pterocles orientalis.</i>	The Large or Black-bellied Sand-grouse.	Bhat titar, bakht titar, bhatta, bara bhala, pahari bhala, siah sina, bhalar, bhotitar, kashmira, bhatillar.	1st April—15th September.
52	<i>Pterocles fasciatus.</i>	The Painted Sand-grouse.	Pahari bhat titar, bhat ban.	Ditto.

SCHEDULE—(contd.)

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period
<i>Birds—(contd.).</i>				
53	<i>Pterocles coronatus.</i>	The Coronetted Sand-grouse.	<i>Bhar titar, bodival bhar titar.</i>	1st April—15th September.
54	<i>Pteroclorus alcheta.</i>	The Large Pin-tailed Sand-grouse.	<i>Bhat titar, bhar titar, dukru.</i>	Ditto.
55	<i>Pteroclorus eximius.</i>	The Common Sand-grouse.	<i>Bhat titar, bakht titar, mindru, cholu bhatitar, khatakkar.</i>	Ditto.
56	<i>Pteroclorus senegallus.</i>	The Spotted Sand-grouse.	<i>Chittidar bhatitar, charar.</i>	Ditto.
57	<i>Syrrhaptes tibetanus.</i>	The Tibetan Sand-grouse.	<i>Kuk, kuling, korundu, kung.</i>	1st March—15th September.

SCHEDULE--(contd.)

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period.

Birds--(contd.).

58	<i>Pavo cristatus</i> ..	Common Pea- fowl.	<i>Mor, bodar, kashmira</i> ..	The whole year (amended by Noti- fication No. 2511, dated 5th February, 1917).
59	<i>Gallus ferrugi- neus</i> .	The Red Jungle- fowl.	<i>Jangli murgha, kukra, kukar.</i>	1st March--15th Septem- ber.
60	<i>Catreus wallichii</i> .	The O h e e r Pheasant.	<i>Chihir, chir, chama, chaha, chair, chegal, chamar chehras.</i>	Ditto.
61	<i>Pucrasia macro- lopha</i> .	The K o k l a s Pheasant.	<i>Koklas, kuak, khwaku, phokras, plachh, kulsa, khwakah, kawnk.</i>	Ditto.
62	<i>Gennæus albi- cristatus</i> .	White-cr est ed Kalij Pheasant.	<i>Kalij, kholsa, kalesha, kulsa, pantig.</i>	Ditto.

SCHEDULE—(contd.)

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period.
<i>Birds—(contd.).</i>				
63	<i>Lophophorus refulgens.</i>	The Monal ..	<i>Monal, munul, narel, neval, khurrari, nil, nil-mor, dang, bod, neroala.</i>	1st March—15th September.
64	<i>Lophophorus impeyanus.</i>	The Bronzobacked Monal.	<i>Ditto ..</i>	Ditto.
65	<i>Tragopan melanocephalus.</i>	Western Horned Pheasant (mis-called Argus).	<i>Phalgar, jigurana, bodul jowar, phalgugal, sing monal, jaghi, mankh.</i>	Ditto.
66	<i>Galloperdix spadicea.</i>	Red Spur-fowl..	<i>Chota janghi murga ..</i>	Ditto.
67	<i>Excalfactoria chinensis.</i>	The Blue-breasted Quail.	<i>Khair bater, bater, batera, khar bater, khar bodna.</i>	1st May—31st August.
68	<i>Coturnix coromandelica.</i>	The Black-breasted Quail.	<i>Chinna bater, chiranj bater, chimal bater, chingra, chinag, chink.</i>	Ditto.

SCHEDULE—(contd.)

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period

Birds—(contd.).

69	<i>Perdica asiatica.</i>	Jungle Bush-quail.	<i>Lowa, butal, bater, luwa batoli.</i>	1st May—31st August.
70	<i>Perdica argunda.</i>	Rock Bush-quail.	<i>Lowa, luwa, butal, laira ..</i>	Ditto.
71	<i>Arboricola torquata.</i>	Common Hill Partridge.	<i>Pemru, ban-titar, surlu, piara.</i>	1st March—15th September.
72	<i>Caccabis chuear</i>	Chukor ..	<i>Chukor, chukru, chakur, chakuru, tig, kaunk, kaki, konk.</i>	Ditto.
73	<i>Ammoperdix bonhami.</i>	See-see ..	<i>Sisi, tiku, chhaukka, kakki, sasi, susi, pankhi.</i>	Ditto
74	<i>Francolinus vulgaris.</i>	Black Partridge	<i>Kala titar, koddhi titar, subharni titar, mushki titar, missi, gora titar, rhaktig.</i>	1st April—15th September.

SCHEDULE—(contd.)

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period.

Birds—(contd.).

75	<i>Francolinus pondicerianus</i> .	Grey Partridge..	<i>Titar, kehmal titar, kundal titar, bagga titar, kundal, putila.</i>	1st April—15th September.
76	<i>Tetraogallus himalayensis</i> .	Himalayan Snow-cock.	<i>Golind, lip, khardang, kharding, lipia, gobind, jar manul, jurtitilur, glurund.</i>	1st March—15th September.
77	<i>Tetraogallus tibetanus</i> .	Tibetan Snow-cock.	Ditto ..	Ditto.
78	<i>Lerwa nivicola</i> ..	Snow Partridge..	<i>Tilla, dheda chakra, ram chakura, ram chakor.</i>	Ditto.
79	<i>Otis tarda</i> ..	The Great Bustard.	<i>Tilur, gurain, khalmor, tiligar, tugdari.</i>	1st April—15th September.
80	<i>Otis titrax</i> ..	The Little Bustard.	<i>Chota tilur, choti tugdari, gurain, godain.</i>	Ditto.

SCHEDULE—(contd.)

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period.
<i>Birds—(contd.).</i>				
81	<i>Eupodotis edwardsi.</i>	The Great Indian Bustard.	<i>Tugdar, tugdari, wadda tugdar.</i>	1st April—15th September.
82	<i>Houbara macqueeni.</i>	The Houbara ..	<i>Tilur, houbara, kurvanak, khernara.</i>	Ditto.
83	<i>Sypheotis aurita.</i>	The Lesser Florican or Likh.	<i>Likh, chola chara, karwanak.</i>	Ditto.
84	<i>Scolopax rusticola.</i>	Wood-cock ..	<i>Chinjariol, jalakri, jalukuri, sumkukri, chabarchor.</i>	1st March—15th September.
85	<i>Gallinago nemoricola.</i>	Wood-snipe ..	<i>Jalakri, sumkukri, chabarchor.</i>	Ditto.

SCHEDULE—(concl'd.)

Serial No.	I	II	III	IV
	Scientific name.	English name.	Vernacular name.	Period.
<i>Birds—(concl'd.).</i>				
86	Gallinago solitaria.	Himalayan Solitary Snipe.	Chaha, jul bater, chabar-chor, jul patur.	1st March—15th September.
87	Rostratula capensis.	The Painted Snipe.	Chaha, chabarchor, rangila chaha, rangin chaha.	1st April—15th September.

KANGRA.

Notification No. 1392-S., the 5th of September 1917.—Preliminary.—Under the provision of Section 25, clause (i), Section 31, clause (j), and Section 75, clause (d) of the Indian Forest Act, 1878 (Act VII of 1878), the Lieutenant-Governor is pleased to make the following rules to regulate hunting, shooting and setting traps or snares in the Kangra District.

All previous notifications on the subject are hereby cancelled:—

Rules.

Extent.—These rules apply to all reserved and protected forests of every class in the Kangra District.

1. *Specifications.*—In these rules the term “big game” denotes the following species of animals:—

Serial No.	I	II	III	IV
	English name.	Scientific name.	Kangra name.	Kulu name.
1	Himalayan Ibex ..	<i>Capra sibirica</i> ..	<i>Trangol</i> ..	<i>Katrol, Tangrol, (S.) Kin (Lahul)</i>
2	Thar ..	<i>Hemitragus jemlaicus</i> ..	<i>Karl, Mehi (F.)</i> ..	<i>Kart Korth (M.), Bakri (F.)</i>
3	The Great Tibetan Sheep, or Nyan or Argali, misnamed Ovis Ammon by sportsmen.	<i>Ovis hodgsoni</i> ..	....	<i>Nyan.</i>
4	The Blue Wild Sheep or Burhel.	<i>Ovis nakura</i> ..	....	<i>Minbu.</i>

Serial No.	I	II	III	IV
	English name.	Scientific name.	Kangra name.	Kulu name.
5	The Himalayan Goat, Antelope or Serow.	Nemorhædus bubalinus ..	Goa ..	Yamu, Emru.
6	Goral	Cemas goral	Pij, Ban Bakri Ghorrur.	Ban Bakri, Gurra, Ghoral, Ghurrul, Gudh.
7	Spotted Deer ..	Cervus axis ..	Chitral, Bura Singh Jhank.	....
8	Hog Deer ..	Cervus porcinus ..	Para ..	....
9	Barking Deer or Muntjac.	Corvulus muntjac ..	Kakar ..	Kakar.
10	Musk Deer ..	Moschus moschiferus ..	Kastura, Raunsa, Bina.	Bina, Kastura Raunsi (F.), Ranwin (F.).
11	Blue Bull or Nil Gai	Boselaphus tragocamelu	Lilgai, Bangai, Rauf.	....
12	Indian Antelope ..	Antelope cervicapra ..	Hiran ..	Teus (M.), Chus (F.), (Ladakh).
13	Tibetan Antelope ..	Pantholops hodgsoni ..	....	....
14	Red Bear or Snow Bear.	Ursus arctus ..	Brahbo, Lagru (sheep-eater).	Rotta Bhalu, Rata Balu, Bhrid, Brahhu.

2. *Prohibition of snares and traps and nets.*—The setting of traps, nets and snares, except by the special permission of the Divisional Forest Officer, is prohibited. This rule does not apply to the trapping of musk-deer, or the snaring of hawks, which are governed by Rule 6.

3. *Prohibition of driving in the snow.*—The driving and killing of big game in the snow are absolutely prohibited.

4. *Big game licenses.*—The shooting of big game is absolutely prohibited except under license to be granted by the Divisional Forest Officer :—

Provided that no officers or men actually serving with any Gurkha regiment stationed for the time being at Dharmsala shall be required to take out a license under this rule, except for the purpose of shooting big game in the Kulu Subdivision or Bagahal. Such officers and men will, however, be subject to the prohibitions and restrictions contained in the proviso to Rule 5 below, and will not be entitled to shoot big game in any forest closed to sport by the Conservator of Forests.

5. *Big game license.*—A license, for which the sum of Rs. 20 in the case of Kulu, Lahoul, Spiti and Bara Bagahal and of Rs. 5 in the rest of the Kangra District, will be charged, will permit the holder to shoot big game in any forest which has not been closed to sport by the Conservator subject to the provision of

Punjab Government Notification No. 1390-S., dated 5th September, 1916, and provided that he does not kill (a) more than the following numbers of the animals specified, or (b) immature specimens, or (c) females other than she-bears :—

- | | | |
|--|----|---------------------------------------|
| (1) Ibex or Tangrol (<i>Capra sibirica</i>) | .. | 3 (no head to measure less than 30"). |
| (2) Nayan (<i>Ovis hodgsoni</i>) | .. | 1 (minimum head 42"). |
| (3) Burhel (<i>Ovis nahuja</i>) | .. | 4 (minimum head 20"). |
| (4) Thibetan antelope (<i>Pantholops hodgsoni</i>) | 2 | (minimum head 22"). |
| (5) Goral (<i>Oemas goral</i>) | .. | 4 |
| (6) Thar or Kart (<i>Hemitragus jemlavicus</i>) | .. | 2 (minimum head 9"). |
| (7) Serow or Yamu (<i>Nemarthrus bubalinus</i>) | 1 | |
| (8) Barking deer or Kakar (<i>Cervulus muntjac</i>) | 3 | |
| (9) Red bear (<i>Ursus arctus</i>) | .. | 2 |
| (10) Spotted deer or Cheetal (<i>Cervus axis</i>) | .. | 2 (minimum head 30"). |
| (11) Indian antelope or Hiran (<i>Antelope cervicapra</i>) | .. | 3 (minimum head 20"). |

6. *Musk-deer ; Hawks*.—The shooting of musk-Deer, both male and female, is prohibited, and no such animal may be taken except as provided by the terms of

the Forest Settlement, or under license of the Assistant Commissioner, Kulu Sub-division. The snaring of hawks is prohibited except under the terms of the Kulu Forest Settlement and under license of the Assistant Commissioner, Kulu. All such licenses issued for the trapping and snaring of musk-deer or hawks shall specify the kind of trap or snare to be employed and the manner in which it is to be set.

7. *Special permission as to licenses.*—Licenses to shoot big game will remain in force for twelve months from the 1st January of the year of issue, and are not transferable. Every license must be returned to the office of issue within a fortnight of the date of its expiry, and the license-holder must endorse upon it the number and kind of big game killed. The Conservator of Forests may, (a) in the case of residents of Kulu other than officials, issue a family license to cover shooting by all members of the family of the holder residing in his house, and (b) in the case of officers travelling on duty, issue a temporary permit for a period not exceeding 30 days on payment of Rs. 5.

Note.—The number of animals which may be killed under a family license is restricted to the number fixed in Rule 5.

8. *Applications for licenses.*—Applications for licenses should be sent by registered post to the Divisional Forest Officer, Kulu, or to the Divisional Forest Officer, Kangra Forest Division, according to the locality in which it is proposed to shoot.

The Conservator of Forests, Punjab, may, at his discretion, limit the number of licenses to be in force at any one time.

Note.—Bara Bagahal and Chota Bagahal are in Kangra Division, while Lahoul and Spiti are in Kulu Division. All forests lying west of Bagahal are in Kangra Division.

9. *Employment of shikaris.*—All holders of licenses to shoot big game in Kulu and Lahoul must employ a shikari registered on the list of shikaris maintained in the Divisional Forest Office at Nagar. The Divisional Forest Officer, Kulu, may at his discretion refuse to enter any name on this register and may strike off any name therefrom. No man not so registered may be employed as a shikari. The yearly registration fee is Re. 1 in exchange for which a badge and certificate will be issued.

10. *Penalties.*—Breaches of these rules are punishable under Sections 25 (i) and 32 of Act VII, 1878, or by the confiscation of any privilege granted under them or both.

11. *Rights of the Rai of Rupi.*—Apart from Rule 5, nothing in these rules shall be deemed to interfere with the recorded "sporting rights" of the Rai of Rupi within the limits of his own Jagir.

12. *Sheep-killers.*—Nothing in these rules shall prevent the destruction of any red bear known to be a sheep-killer, either in defence of property or with the

permission in writing of the Assistant Commissioner or the Divisional Forest Officer, Kulu.

13. The Conservator of Forests may prepare, in October of each year, a list of forests, which shall be closed to the public generally for hunting and shooting as sanctuaries for the protection of game. The list shall be published in the *Punjab Gazette*, a copy shall be hung up for information in the offices of the Deputy Commissioner and Divisional Forest Officer, and a copy shall be given to every person taking out a shooting license.

14. A license may be cancelled at any time by the officer granting it, or by the Conservator of Forests. Any breach of the Forest Act or of any rule made under the Act, if committed by the holder of the license or any of his retainers or followers, shall render the license liable to cancellation. Licenses are liable to be declared invalid in regard to any particular forest in case of fire breaking out in any part of that forest or in case of unwarrantable interference with forest work.

15. The holder of a license is not exempted from liability under the Forest Act, or any other law, for any thing done in contravention of such Act or law, for any damage caused by him, his retainers or followers.

Note.—Sections 25 (i) and 32 (h) of the Forest Act prescribe penalties for breach of these rules, and Section 67 of that Act empowers the Divisional Forest Officer to compound any such breach on payment of a sum of money.

RAIPUR ZEMINDARIES.

1. Sportsmen wishing to shoot in the Raipur Zemindaries must obtain permission beforehand from the Deputy Commissioner, Raipur, by whom alone licenses will be granted. An applicant for a license will be required, before the license is granted, to sign a promise to abide by the rules set forth below, and to report their bag including wounded animals to the Deputy Commissioner as soon as they leave their beat. No license will be granted to cover more than 30 days' stay in any one beat. When the Deputy Commissioner grants a license, he will also grant a *parwana* for assistance to be given to the person or persons to whom the license is granted. Applications for licenses and *parwanas* should reach the Deputy Commissioner, Raipur, not more than four months and not less than one month before the applicant proposes to reach the shooting ground. "Sitting up" over water, salt-licks or paths leading thereto, is not permitted. No immature bulls or stags and no cows or hinds may be shot.

2. The following are the limits to head of buffalo and bison that may be shot annually in each block :—

Block.				Buffalo.	Bison.
Phingeshwar and North Bindra Nawagarh				1	1
Central	"	"	..	1	1
South	"	"	..	2	2

	Block.		Buffalo.	Bison.
Kauria and Deori	1	<i>Nil.</i>
East Phuljhar	1	<i>Nil.</i>
West Phuljhar	<i>Nil.</i>	1
Bilaigarh-Bhatgaon	<i>Nil.</i>	1

The year commences on July 1st.

NOTE.—A buffalo or bison once wounded counts towards the limit whether brought to bag or not.

3. Subject to the ordinary etiquette among sportsmen, the fact that a shooting party has obtained permission to shoot in any beat will not debar a Government officer travelling on duty from shooting therein in the ordinary course of his tour. The Zemindaries have been divided up into the following beats. Only one party of not more than 3 guns will be allowed to shoot at one time in any beat:—(1) Phingeshwar and North Bindra Nawagarh to a line drawn east and west through Nawagarh; (2) Central Bindra Nawagarh from the above line to one drawn east and west through Tarenga; (3) South Bindra Nawagarh, all south of line through Tarenga; (4) Suarmar and Khariar North; (5) South Khariar. [*Note.*—(1) These beats are divided by line drawn east and west through Komna. (2) Suarmar and Khariar are closed to shooting parties until further notice except for *carnivora*.] (6) Kauria and Deori; (7) East Phuljhar; (8) West Phuljhar. [*Note.*—These beats are divided by a line drawn north and south through Saraiipali.] (9) Bilaigarh and Bhatgaon.

SIND.

No. 5296, 12th May, 1915.—In exercise of the powers conferred by Section 25, clause (i), Section 31, clause (j), and Section 75, clause (d), of the Indian Forest Act, 1878 (VII of 1878), and in supersession of Government Notification in the Revenue Department, No. 6254, dated the 25th July, 1894, the Governor in Council is pleased to prescribe the following rules to regulate hunting, shooting, poisoning of water and setting of traps or snares in the reserved and protected forests of the Province of Sind :—

1. The following acts are prohibited in all reserved and protected forests :—
 - (a) The poisoning of rivers or other water, the explosion of dynamite or other explosive therein, the setting of cruives or basket traps for the purpose of killing or catching fish ;
 - (b) the setting of spring guns, snares or traps ;
 - (c) the taking, wounding or killing of—
 - (i) game other than *carnivora* or pig over water, salt-licks or paths leading directly to water or salt-licks ;
 - (ii) any of the game birds or animals mentioned in the appendix during the close-seasons specified therein ;

- (iii) such insectivorous or gay-plumaged birds as may from time to time be notified in this behalf by the Conservator of Forests :

Provided that any of the above acts may be done with the written permission of the Deputy Conservator of Forests or, in the case of snares or traps, of the Divisional Forest Officer.

Note.—For the purpose of this rule, the word “*carnivora*” includes wolf, hyena and wild dog.

2. (a) In any reserved or protected forests or portions of reserved or protected forests to which the local Government may, for the purpose of strict conservation or for the preservation of animals which are becoming rare, or for both of these purposes, apply this and the following rules by a Notification published in the *Bombay Government Gazette*, hunting and shooting are prohibited except under a license to be obtained from the Deputy Conservator of Forests.

(b) Every license issued under clause (a) of this rule shall permit the holder only to hunt and shoot, and shall be valid for a period of one year from the date of its grant, in any reserved or protected forest in the Province of Sind to which these rules are made applicable under clause (a), subject to the condition that before it has effect in any Forest Division in which the licensee does not reside or exercise any jurisdiction, it must be countersigned by the Divisional Forest Officer.

(c) No such license shall entitle the holder to hunt or shoot more than two males of each species of animal to be specified in the license, according to a list to be prepared for each Forest Division by the Deputy Conservator of Forests.

3. Licenses shall not be refused except for special reasons to be stated in writing.

4. Wounded game may be pursued into the forests of the division adjoining that for which the license is valid or into a forest closed under Rule 7.

5. A license granted under these rules shall not be transferable.

6. Every person to whom a license has been granted under these rules, and who is found hunting, shooting, snaring or trapping in any forest to which these rules apply, shall, on demand by any Forest, Police or Revenue Officer, produce his license.

7. The Deputy Conservator may, on the recommendation of the Divisional Forest Officer and the Collector, declare that any particular forest or part of a forest is wholly closed for a term of years or annually for a specified season. He may also prohibit the taking, wounding or killing of any particular species of animal in any specified tract of forest, with a view to the preservation of such species, but any such order shall be subject to revision by the Commissioner. To such forest the validity of licenses granted under these rules does not extend or is

modified accordingly: provided that gazetted officers whose jurisdiction extends to such forests, or persons holding licenses on which the Divisional Forest Officer has endorsed special permission to that effect, may kill pig and other dangerous or destructive animals in such forests. Such special permission shall not be given for a longer period than one month in any case.

8. If any person to whom permission under Rule 1 (c) or a license under Rule 2 has been granted commits a breach of any provision of the Indian Forest Act, 1878 (VII of 1878), as amended by the Forest Act, 1890 (V of 1890), or of any rules made thereunder, he shall be liable to the penalty of having the permission or license, as the case may be, cancelled by the Divisional Forest Officer, in addition to any other penalty to which he may be liable under the Indian Forest Act, 1878 (VII of 1878), or otherwise. An appeal against the cancellation of the permission or the license by the Divisional Forest Officer shall lie to the Collector, whose decision shall be final.

9. In any case where the Divisional Forest Officer or Deputy Conservator thinks it advisable he may direct that a Forest Guard or other person shall accompany the camp of any license-holder hunting or shooting in forests, with the object of seeing that Forest Rules are not infringed by camp followers.

10. The word "hunting" as used in these rules, includes tracking for the purpose of discovering the lie of wild animals, provided that any person holding a license is not prohibited from employing any number of trackers.

11. Nothing in these rules shall be taken to exempt any person from liability in respect of any offence by injury to the forest or its produce or of any other offence punishable under the Indian Forest Act, 1878 (VII of 1878), as amended by the Forest Act, 1890 (V of 1890).

12. Nothing in these rules shall be taken to cancel any privileges granted to resident wild tribes except by the express order of the Collector or to preclude the grant of special permission by the Divisional Forest Officer or Collector to resident villagers on special occasions.

N.B.—Forests in which wild tribes have been given the privilege of hunting will not generally be notified under Rule 2.

APPENDIX.

The game birds or animals referred to in Rule 1 (c) (ii) are as below and the close season is fixed as follows :—

(A) BIRDS.

Wild birds or animals.				Close time.	
1				2	
1. Egret	..	..	..	) From 1st April to 31st October in each year.	
2. Heron	..	..	..

(A) BIRDS—(contd.)

Wild birds or animals. 1	Close time. 2
3. Bittern	From 1st April to 15th September in each year.
4. Bustard (Great Indian) ..	
5. Bustard (Tilur or Houbara) ..	
6. Curlew (in the Karachi District only) ..	
7. Duck (all kinds, including Geese) ..	From 1st March to 1st October in each year.
8. Florican	
9. Grebe (Crested)	From 1st April to 15th September in each year.
10. Lapwing	
11. Paddy-bird	
12. Partridge (Black and Grey) ..	From 15th March to 15th September in each year.
13. Peafowl	
14. Quail (Bush)	From 1st April to 15th September in each year.
15. Quail (Bustard)	
16. Quail (Rain)	
17. Sandgrouse (all descriptions) ..	

(A) BIRDS—(*concll.*).

Wild birds or animals, 1	Close time, 2
18. Snipe, Painted .. . 19. Tern, Little 20. Whimbrel (in the Karachi District only).	} From 1st April to 15th September in each year.
21. Babler, Jungle, or Seven Sisters .. . 22. Barbet (in the Karachi District only)	
23. Hoopoe	
24. Jay, the Blue-winged (in the Karachi District only).	
25. King-crow, or Black Drongo .. .	} The whole year.
26. Kingfisher	
27. Mynah (Common)	
28. Oriole, Indian	
29. Ortolan or Rufous Short-toed Lark	
30. Roller	
31. Starling (in the Karachi District only)	
32. Pigeon	

(B) ANIMALS.

Wild birds or animals.			Close time.	
1			2	
1.	Ass	.. ..	..	The whole year.
2.	Deer (Hog Deer)---			
	Doe	.. ..	..	The whole year.
	Male	.. ..	..	From 1st June to 31st October in each year.
3.	Gazelle (Chinkara)---			
	Doe	.. ..	..	The whole year.
	Male	.. ..	..	From 1st April to 30th September in each year.
4.	Goat (Sind Ibex)---			
	Male	.. ..	..	From 1st April to 30th September in each year.
	Female	.. ..	..	The whole year.
5.	Hare	.. ..	..	1st April to 15th September in each year.
6.	Sheep (Ghad or Oorial)---			
	Female	.. ..	..	The whole year.
	Male	.. ..	..	From 1st April to 30th September in each year.

SIKKIM STATE.

Rules regulating hunting, shooting and fishing within the territories of His Highness the Maharaja of Sikkim State :—

1. These rules apply to all sportsmen and others whether residents, visitors, ladies or gentlemen, i.e., whether subjects of the Sikkim State or not, but may be waived in the case of anyone to whom His Highness the Maharaja of Sikkim may be pleased, by written order, to grant an exemption. The rules are applicable to the whole of the territories of His Highness the Maharaja of Sikkim, and shooting is only permissible in such tracts, with the exception of those which are excepted by clause (ii) and such others as may, from time to time, be excepted by notification.

2. (i) The driving, for purposes of killing or scaring away, of bears, leopards, and pigs by *bustiwalas*, for the protection of their crops, etc., is permitted throughout the year ; provided the drive is not made in any Reserved Forest. The destruction of these animals by all others must be by license. (ii) The shooting of musk-deer is totally prohibited. Except in the rare instances where, owing to the excessive number, other arrangements become necessary, the destruction of the females of *ovis hodgsoni* (the ammon of sportsmen), burhel, Tibetan gazelle, tahr and any deer, is forbidden.

3. The erection and use of fixed engines, the construction of weirs, the poisoning of rivers or streams, or the killing of fish by any explosives, damming and baling water, and the use of nets with meshes of a smaller dimension than one inch square, to catch fish, is prohibited in all rivers and streams within the limits of the Sikkim State. All fixed engines, erected or used, or nets, used in contravention of the above rules, shall be liable to seizure, forfeiture and removal. All fish taken by means of any such fixed engines, or nets, shall be liable to forfeiture. The killing or destruction of birds, etc., by pellet-bows (*gulelee*), traps, bows and arrows, catapults, birdlime, and other means whatsoever, is prohibited. In regard to the destruction of vermin, i.e., birds, etc., that prey on other birds, and are a curse to bird and other life, the General Secretary to His Highness the Maharaja of Sikkim is authorised to issue orders in writing for their destruction. The possession or the use of nets, snares or other appliances for the express purpose of taking birds, or wild animals, is illegal. The sale, or export for sale, of horns or skins of game animals mentioned in Rule 2, is prohibited. The sale of the skins of black bears and leopards is allowed.

4. The following close seasons shall be observed :—All stags, with horns not in velvet, and male antelopes—1st May to 31st October. Hornless male deer, or deer when the horn is in velvet, and females of all deer and antelopes—the whole year. Hare—1st May to 30th September. Green and imperial pigeon—1st February to 31st July. Ducks, geese, teal, and other wild fowl—15th March to 30th

September. Woodcock, and snipe in general—1st April to 31st August. Pheasants and partridges, and other game birds not herein mentioned—15th March to 30th September. During the season thus defined no one shall destroy, net, or capture, in any fashion, any of these animals and birds or their young, nor shall the eggs of any non-domesticated birds be taken. Neither shall any person capture with snares, nets, or hooks any birds. No nets, snares, or lines with hooks, may be set on any lake, jhil, river or stream for ducks, geese, teal and other wild fowl.

5. The following tracts are closed until further orders, and no shooting is permitted therein :—(i) All the lands running north from the Yali Chu to the Tang-Ka-la, excluding the valley of the Tang-Ka-la. (ii) All the side lands of the Lachen river from Chungthang to Thangu, excluding the valley of the Thangu Chu. The whole of the Talung valley from Re upward, including all the side valleys on either side. (iii) All the lands forming the head-waters of the Rungeet river north of a line drawn from Moinam Rock to Dubdi Monastery.

6. Licenses to shoot large and small game and also for fishing—and without which no person is permitted to shoot or fish or proceed in search of game—will be granted as follows :—(i) A license, for which Rs. 30 will be charged and which will be in force for twelve months, permits the holder to shoot in the tracts which are open for sport, the following number of animals only :—*Ovis hodgsoni* (ammon) 1, *ovis nahura* (burhel) 2, Tibetan gazelle 1, serow 2, tahr 2, goral 3, sambhar 1,

antelope 1, barking deer (no number), bears, leopards and pigs (no number). Every holder of a license under this rule shall also pay, if he be appointed by the Sikkim Durbar, for a *chaprassi* to accompany him and his camp, during the time he is in the locality mentioned in the licenses. The sole duty of the said *chaprassi* will be to see that none of the Rules are infringed by the license-holder or followers. (ii) A small game license, for which Rs. 10 will be charged, will enable the holder to kill the birds mentioned in Rule 4 during the seasons declared not to be "close," *vide* Rule 4. (iii) A fishing license, for which Rs. 2-8 will be charged, will enable the holder to catch or to kill fish by using nets with meshes of not any smaller dimension than that of one inch square, fishing hooks and other legitimate sporting snares. (iv) No sportsman may take out more than one each of any of the above licenses. The State reserve to themselves the right to refuse the issue of any of the above licenses if demanded by any circumstances whatsoever.

7. A special license, for which Rs. 20 will be charged (and which may be repeated once), will enable the holder of the Rs. 30 [*vide* Section (i) of Rule 6 above], license to kill one specimen extra of any one of the animals laid down in Section (i) of Rule 6 above. Another special license applicable to *bona-fide* inhabitants of the Sikkim State for which a license fee per annum of Rs. 15 will be charged, shall enable the holder to kill deer (but not any which are specially mentioned by their natural name and fixed number provided for, in the main rules); bears

and wild pigs in, or in the precincts not beyond half a mile of their cultivation within the Khasmahals only. This license will not enable anyone to shoot in the Reserved Forest or to drive game into their cultivation, etc. Beating for game is not allowed under this license. This license must be taken for a year. These licenses shall be:—(a) non-transferable; (b) available for the period specified therein, but shall be available for a period which shall not, in any circumstances, exceed twelve months, and (c) applicable to the locality mentioned in the licenses.

8. Every person to whom a license has been granted under these rules, and who is found hunting, shooting, or fishing in any locality to which these rules apply, shall, on the demand of any Forest Officer, having jurisdiction in the locality produce his license. Any breach of these rules shall be punished, on first conviction, with a fine not exceeding Rs. 25, or with imprisonment for a term not exceeding one month or both; on second conviction, with a fine not exceeding Rs. 100 or with imprisonment not exceeding four months, or both. In either conviction the punishment awarded will be in addition to the forfeiture to the State, of the guns or other weapons, and dogs, fixed engines and nets of the offender, as well as all trophies; provided that when the offender is not a Sikkim subject the case shall be reported to the Political Officer in Sikkim for disposal in such manner as he may think fit; but his license shall be considered as cancelled. Subject to the same proviso, if any breach of Rule 5 occur the offender shall be punished, on first conviction, with a fine up to Rs. 100 or with imprisonment not

exceeding 3 months or both ; and in the case of any second conviction, the punishment shall be by fine which may, in any one case be fixed up to a sum of Rs. 100 or more, but not more than Rs. 200, or with imprisonment up to 4 months or both, together with forfeiture, in each case, of such possessions as are laid down above.

9. The following dimensions are laid down, as a definition of shootable heads permitted to be killed under the terms of the Sikkim Game Laws :—Annon, 35 inches ; burhel, 23 inches. Sportsmen are requested not, on any account, to leave their shooting weapons with their shikaris on quitting the shooting ground nor to make presents of firearms, or of ammunition, to subjects of the country. Shikaris are warned that, if they are found in possession of any weapons after their employers have left the shooting ground, they will be dealt with under Rule 8 of these rules.

The following scale of rewards will be paid by His Highness the Maharaja of Sikkim for vermin killed under Rule 5, or by license-holders, or others especially privileged :—Leopards (snow and common), Rs. 5 ; bears, Rs. 3 (skins to remain the property of the killer, if a license-holder) ; wild dogs and otters, As. 8 ; foxes and (Indian pine) martens, As. 4 ; jackals, martens (other than above), wild cats and weazels, etc., As. 2. In all cases the reward will be paid on the skins being brought, or sent, by the killer, before being tanned, to His Highness the Maharaja

of Sikkim. They will then be stamped, under the authority of His Highness the Maharaja of Sikkim, and be returned to the owner if a license-holder, the remainder being retained and sold by the Forest Department which will award further monetary reward. Skins brought in by skin merchants shall not be recognised for rewards.

10. License-holders who, by the conditions of their licenses, are enjoined not to kill more than a specified number of animals, are requested, on the expiry of the period of the license to return the same to His Highness the Maharaja of Sikkim, with a written statement showing the number of animals killed by them duly signed. Sportsmen are enjoined kindly to report to the General Secretary to His Highness the Maharaja of Sikkim all cases of serious injuries received by shikaris, beaters and other State subjects (with full description and address), whilst employed in beating, etc., in their service, together with a full report on the circumstances of the occurrence, and of any compensation or money reward paid by them to the injured person, or persons, or his or their relatives. Any disregard of this rule may result in the refusal of a shooting license, on any further occasion, under the provisions of Rule 6. His Highness the Maharaja of Sikkim would be grateful to any license-holder who kindly reports any infringement of these rules.

Note.—Applications for licenses may be made to the General Secretary to His Highness the Maharaja of Sikkim, Gangtok, to whom all other communications should be addressed in person or by letter.

SIROHI STATE.

The following rules have been framed for the protection of wild birds and game in the Sirohi territory :—

1. No person shall shoot, snare, net, catch or otherwise destroy any wild bird or game animal except under a license from the Diwan of Sirohi, which can be obtained by Railway officials through the Manager, R.-M. Railway, and by others through the Resident, Western Rajputana States. (N. B.—No peacocks or blue pigeons are to be shot at under any circumstances.) A “breeding season” is established from the beginning of March to the end of August every year, during which period no licenses will be issued nor anybody allowed to shoot, snare, net, catch or otherwise destroy any wild bird or game. No does or deer or antelope or sambhar may at any time be fired at. No pigs are to be shot by any one. The license shall be non-transferable, and shall be valid only for the time for which it is issued, and should be returned to the Diwan’s office on expiration of its term. The following places are reserved by the Darbar and may not be shot in :—

Bharja, Telpur, Isra, Urwaria, Mirpur, Mera, Mandwara, Adarli-Ka-Vera (near Urwaria), Sionti-ro-Duro (near Vasthanji) San-yaro-Vero (near Urwaria), Okeraro-Vero (near Vasthanji), Kachholi, Sangwada, Aspura, Kotra, Sanar, Tokra, Toda, Girwar, Mungthala and the reserve of Chandella, Sirohi and the villages near it

namely, Rampura, Verapura, Palri, Pipalki. Sirohi grass *bir*, Kollar, the hill of Sarnua, village Balda, deserted village Rajpura between Balda and Sanwara.

2. If any person acts in contravention of the above rules, every bird or head of game killed or caught will be confiscated and the person so acting will be liable to a fine of Rs. 5 for first offence, and Rs. 10 for subsequent offences, the weapon or instruments being retained until fines are paid. Any person giving such information as may lead to the conviction of a breach of Rule 1, will be entitled to receive half of the amount of fine levied for such offence. Gentlemen are expected to exercise moderation in killing game. These rules do not apply to Abu and its slopes, for which separate rules are made.

SOUTHERN RAJPUTANA STATES.

The States of Dungarpur, Banswara and Partabgarh, and the Chiefship of Kushalgarh have no regular Game Laws. Broadly speaking, the killing of deer, tigers, panthers and pig are prohibited everywhere save with the permission of the Darbars concerned. In addition, certain forest areas are reserved for shooting where grazing and intrusion by the public are forbidden.

These rules are administered strictly or otherwise according to the inclination of the Ruler.

TRAVANCORE.

The following are among the revised rules passed under Section 21 (g) and Section 22 (f) of the Travancore Forest Regulation, with the sanction of His Highness the Maharaja :--

1. A fee of Bh. Rs. (50) fifty shall be levied for each license to hunt or shoot in the Reserved Forests of a Revenue Division and of Bh. Rs. (25) twenty-five in the case of lands at the disposal of Government and not included in Reserved Forests in all parts of Travancore, except in the Devicolum Revenue Division. In the Devicolum Revenue Division the fee shall be Bh. Rs. (100) one hundred in the case of Reserved Forests and Bh. Rs. (50) fifty in the case of lands at the disposal of Government and not included in Reserved Forests. Provided, however, that the person applying for a license to shoot in Reserves may also be entitled to shoot in the adjoining lands at the disposal of Government not included in such Reserves, on condition that at the time of applying for such license, he intimates to the Conservator his desire to do so. Owners of packs of hounds and dogs, consisting of five or more in number and kept or used for the purpose of hunting shall apply to the Conservator of Forests for the registration of their packs, and shall pay a fee of Bh. Rs. (100) one hundred for a license for the privilege of hunting with dogs. No two packs shall be kennelled or hunted within a radius of 12 miles of one another

by the shortest road. Persons desirous of hunting or shooting for sport should apply to the Conservator of Forests, stating the locality where they wish to shoot and the time for which a license is required, and if there is no objection, a license will be granted. In the case of lands at the disposal of Government and not included in a Reserved Forest, the Conservator of Forests shall obtain the views of the Division Peshkar or the Commissioner, Devicolam Division, as the case may be before he grants a license. No such reference is however required in the case of application for shooting in Reserved Forests. The Conservator of Forests may, after obtaining the sanction of Government, issue special licenses to persons desirous of hunting or shooting for sport in Reserved Forests or in lands at the disposal of Government and not included in Reserved Forests, *throughout the State*. The fee for such a special license shall be Bh. Rs. (200) two hundred, and the license shall be valid for one year. The Conservator of Forests shall, on receipt of applications from the proprietors of Estates adjoining Reserved Forests or lands at the disposal of Government and not included in Reserved Forests, grant them yearly licenses on payment of the fees prescribed therefor. Applications may be made, for the sake of convenience, in printed forms obtainable from the Conservator of Forests or in manuscript forms containing the following particulars:—(1) Full name of the applicant, (2) residence and address, (3) occupation, (4) reasons for the application (here state whether it is for sport or for defence of property, etc.), (5) Reserved Forests or lands at the disposal of Government and not included in Reserved Forests,

where the applicant intends to hunt or shoot, (6) if applicant applies for shooting in Reserved Forests, whether he wishes to shoot in adjoining lands at the disposal of Government not included in Reserved Forests, (7) period for which the license should run (the date of expiry not to run beyond the last day of the Malabar year), and (8) signature of the applicant and date. No shooting is permitted in advance of receipt of the license, and applications in writing for a license should be made at least one month in advance of the date on which the license is required.

2. No license shall, however, be granted for hunting or shooting for sport big game and feathered game except pigeons within any Reserved Forests between the 1st of June and the 30th September and small game between the 15th of March and the 15th of September, both days inclusive, of each year. This period shall, for this purpose, be deemed to be a close season. But the Conservator of Forests may, with the sanction of Government, declare, by notification in the Gazette, any Reserved Forest or any portion thereof to be closed against shooting, either permanently or for any prescribed period as may be considered necessary. He may also likewise declare any land at the disposal of the Government and not included in a Reserved Forest to be closed against shooting for any specified period. In special cases where the Government think it necessary, licenses may be granted for shooting game even during the close season, subject, of course, to such precautionary measures as may seem necessary. A license shall not be transferable, and it shall not run beyond the last day of *Karkadagom* of the year in which it was

granted. It must be shown, on demand, to any officer of the Forest, Police, or Land Revenue Department. A license authorises the holder to kill all animals, other than those mentioned in Rule 3, provided that such holder shall not, under any circumstances, kill more than two heads of each of the mature males of bison, ibex, spotted deer, sambhar and such other animals as may hereafter be specified by the Government, under cover of a single license in any year. The maximum allowed by this rule for a single license-holder includes any female or immature male which may have been shot whether such shooting has been penalised or not.

3 It shall not be lawful for any person, whether holding a license or not, to :
 (i) shoot at, kill, capture, pursue or attempt to kill or capture at any time any elephant or monkey, or any of the following :—(a) any female or immature male of bison, ibex or antelope, (b) female immature or mature male of sambhar, spotted deer which are hornless or whose horns are in velvet, (c) hornless male deer or deer with horns in velvet, and (d) any other animal which the Government may, by notification in the Government Gazette, specify at any future date ;
 (ii) take the eggs of pea-hens or jungle hens at any time ; (iii) to shoot at small game between sunset and sunrise. Provided that owners and occupiers of Estates may be allowed to drive away, by shooting, any animals that may be found doing damage to their cultivation.

4. *Explanation I.*—A sambhar is immature if neither of its horns measures 28 inches and a spotted deer is immature if neither of its horns measures 26 inches

in length, measurements in either case being taken along the outer curve of the horn from the burr to the point. *II.*—A bison is immature if the span of its horns is less than 30 inches, the measurement being taken horizontally between the outer edges of the horns at their widest spread. *III.*—An ibex is immature on which the saddle is not fully developed. *IV.*—An antelope is immature if the length of its longest horn is less than 14 inches.

5. The shooting of jungle sheep with shot is strictly forbidden. The bag allowed under a license for the whole season shall be the maximum irrespective of the number of licenses taken out. The actual firing at, or killing, should be by license-holders alone and the camp followers, and shikaris and others aiding the license-holder are not permitted to fire at, or kill, any game. The heads of all *immature* animals killed by license-holders must be sent as soon as possible to the nearest Forest or Police Officer with a report and these shall be confiscated to Government. Beating or the setting of traps or snares for game is strictly forbidden. No license is required for fishing in Reserved Forests, or in lands at the disposal of Government though not included in a Reserved Forest, which are not closed by a special order, but, the Conservator of Forests may, if this privilege is abused, or for any other reason, declare, with the sanction of Government, by notification in the Government Gazette, all or any rivers, streams or lakes, situated within any Reserved Forest, or lands at the disposal of Government though not included in a Reserved Forest, to be closed against fishing without a license. The use of mesh

nets, poison and dynamite or other explosives in water is absolutely prohibited anywhere within the limits to which these rules apply.

6. Whoever commits any breach or infringement of these rules is liable, on conviction, to punishment under Section 21 or Section 22 of the Forest Regulation, as the case may be.

UNITED PROVINCES.

No. 441—XIV-31-1906. *The 2nd August, 1906.*—In exercise of the powers conferred by Section 25, clause (i), and Section 75, clause (d), of the Indian Forest Act (VII of 1878), and in supersession of Notification No. $\frac{391}{\text{XIV}-122-1204}$, dated the 28th June, 1905, the Lieutenant-Governor is pleased to prescribe the following rules as to hunting, shooting, fishing, the poisoning of water, and the setting of traps or snares in the Reserved Forests in the United Provinces of Agra and Oudh :—

UNDER SECTION 25 (I).

1. In these rules the word “hunting” includes tracking for the purpose of discovering the lie of wild animals.

2. The following acts are absolutely prohibited within a Reserved Forest :--

- (1) Poisoning or dynamiting rivers and other waters.
- (2) Driving or destroying birds or animals in the snow.
- (3) Poisoning carcasses of animals.

Under Section 25 of the Indian Forest Act, the Deputy Conservator may sanction, subject to such conditions as may be necessary, the poisoning of carcasses of animals killed by wild dogs in order to destroy the latter.

(4) Spearing and running deer with dogs.

(5) Watching in the neighbourhood of water or salt-licks between sunset and sunrise to shoot animals other than *carnivora* resorting to such places.

(6) The erection of dams, weirs, or fixed traps, the diversion of streams for the purpose of catching fish, and the driving of fish.

3. The following acts are prohibited within a Reserved Forest except as provided below :--

(1) The setting of snares or traps except with the written permission of the Divisional Forest Officer.

(2) Hunting, shooting, or fishing, except--

(a) by a person holding a permit granted by a Divisional Forest Officer ;

(b) by a person permitted by order of Government to hunt, shoot, or fish without a permit ;

(c) by a person authorized under the Elephant Preservation Act, 1879, to kill and capture wild elephants to the extent he is so authorized ; and

(d) for the purposes of destroying *carnivora* in the immediate neighbourhood of habitations and cattle stations.

(3) The use of nets for the catching of fish, except—

(a) that in the River Ganges, Jumna, and Sarda, nets of which the mesh is not smaller than $1\frac{1}{2}$ inch square may be used ;

(b) that in other rivers and streams, drag, clap, and casting nets with a mesh not less than $1\frac{1}{2}$ inch square may be used by right-holders or persons holding permission in writing from the Divisional Forest Officer ; and

(c) by permit-holders for purposes of bait.

4. The Conservator may, with the previous sanction of Government, prescribe sanctuaries to be kept closed for a fixed number of years wherein all hunting and

shooting shall be absolutely prohibited. This prohibition extends to all persons whether exempted or not.

5. The Conservator shall divide the forests into shooting areas and shall fix the number of any species that may be shot in any one year, in any one area, and restrict shooting so as to prevent the fixed limit being exceeded. This restriction applies to both permit-holders and exempted officers.

6. Permits of the following descriptions to hunt, shoot, and fish may, subject to the control of the Conservator, be granted by a Divisional Forest Officer for a shooting area in his charge in the case of permits under Form A, for a river or group of rivers in the case of permits under Form B, for the Reserved Forests of the provinces in the case of permits under Form C, and for the Naini Tal and Jaunsar forest division in the case of permits under Form D :

- (a) An ordinary permit in Form A allowing the holder to hunt, shoot, and fish with rod and line subject to any restriction imposed under Rules 4 and 5 above.
- (b) A permit in Form B allowing the holder to fish with rod and line and to destroy others.
- (c) A permit in Form C allowing the holder to shoot game birds and ground game.

- (d) A permit in Form D allowing the holder to shoot in the hill forests of the Naini Tal and Jaunsar forest division, subject to any restrictions imposed under Rules 4 and 5 above.

Note.—Permits under (a) of this rule in the Dehra Dun District do not authorise fishing in the waters controlled by the Dehra Dun Fishing Association. For such waters a separate permit is necessary, (No. 380 XIV-72, dated 17th May, 1917.)

7. (1) A permit in Form A shall only be available for the person in whose name it is issued, and number of guns specified. Permits in Forms B, C and D, are personal, that is non-transferable.

(2) Every person to whom a permit has been granted shall, on the demand of any forest or police officer, produce it.

(3) A permit granted by a Divisional Forest Officer shall be valid only for the shooting area detailed therein, provided that wounded game may be pursued into any other shooting area.

(4) A permit may be cancelled at any time by the Conservator or Divisional Forest Officer if circumstances render it advisable.

(5) The permit-holder is responsible that the members of the party observe the forest law and rules and the conditions of the permit. If the Divisional Forest Officer considers that any member of the party has committed a wilful breach of

the said law, rules or conditions, he may cancel the permit : the whole party shall thereupon quit the forest immediately.

(6) Nothing in these rules shall be taken to exempt any person from liability in respect of any offence by fire, injury to the forest or its produce, or other offence punishable under Section 25 of the Indian Forest Act (VII of 1878).

(7) The holder of a permit shall encamp only on such camping grounds as are entered in the permit or have been set apart by the forest authorities, or in places specially pointed out to him by a forest official.

(8) The holder of a permit shall not shoot or allow to be shot at, any animal or bird, the shooting of which is not permitted by the terms of the permit.

The Deputy Conservator, when granting a permit, may give the holder special permission to shoot other birds and small mammals required *bona fide* for purposes of natural history.

(9) The holders of the permit shall not shoot or allow to be shot more than the number of heads of any species entered in the permit.

(10) The holder of the permit may take into the forests only the number of retainers and followers and of elephants, dogs, or other animals entered by the Divisional Forest Officer in the permit.

(11) A charge of Re. 1 per diem for each elephant entered in the permit shall be paid (no separate charge shall be levied for fodder).

This charge and the permit fee shall be paid in advance. No charge shall be levied in the case of forest officers within their charges, or of person taking out an animal permit under Rule 11, up to a limit of two elephants.

(12) On a permit-holder vacating the shooting area, of which he holds a permit, he shall return his permit to such official as may be named on it after entry on it of the number and species of all animals killed by him and his party. He shall also report any breach of Rule 8 (3); exempted persons and persons taking out an animal permit (Form A) under Rule 11 shall furnish similar returns to the Divisional Forest Officer, shooting area by shooting area, on the last day of every month, during which they may have been shooting in the forest, so that record of the number and species of animals killed may be kept up.

(13) Persons residing in Native States, who wish to obtain permits or accompany permit-holders, shall apply to the forest officer through the political or district authorities concerned. (No. 305 XIV-60, dated 9th May, 1913.)

8. Permits in Form A may be granted for specified time not exceeding 15 days, in Forms B and C for a period not exceeding one year, and in Form D for a

period not exceeding three months, on the following conditions in addition to those entered in Rule 7 above :—

(1) That the holder shall observe the close season for birds as entered in the permit.

(2) That the holder shall shoot only the game or edible birds entered in the permit, birds of prey, and vermin.

(3) That the holder shall not, without special permission of the Divisional Forest Officer, endorsed on the permit, shoot the females of wild sheep, goat or antelope, nor males without horns or with horns in velvet.

9. The following fees shall be paid for permits :—

Form A { By resident in India Rs. 10 each. By visitors from { For a permit for
Europe and Foreign countries, Rs. 25 each. } 15 days or less.

Form B.....Rs. 8 for 15 days or less, or Rs. 5 per annum.

Form C.....Rs. 5 for a period not exceeding one month, or Rs. 20 per an annual permit.

Form D.....Rs. 15 for a period not exceeding three months to cover big game shooting alone, or Rs. 25 to include game birds and ground game.

Not more than one permit in Form A shall be granted for the same period in the same shooting area, and 15 days shall elapse between the grant of two successive permits in the same area.

10. A forest official shall be appointed to attend the permit-holder to show the boundaries of the shooting areas within which the permit is valid and to accompany the party if deemed advisable by the Divisional Forest Officer.

11. An annual permit may be granted by a Divisional Officer, subject to the control of the Conservator, to official and non-official residents of civil districts in which Government forests are situated, on an annual payment of Rs. 100 ; such permit-holders shall be entitled to hunt, shoot, and fish in the forests of that district only, subject to the same conditions as ordinary permit-holders and to be accompanied by two elephants free of charge, provided that—

- (i) they shall not hunt or shoot in areas in which a permit in Form A is in force ;
- (ii) should they wish to take in more than two elephants, they shall apply for a permit in Form A and pay the fees, under the ordinary rules.

Note.—(a) The two elephants referred to above shall only be allowed in the forest during the period that the permit-holder is hunting, shooting, or fishing in these forests.

(b) The object of an annual permit is to afford special facilities to *bona fide* residents of districts. An official is eligible for an annual permit only for the district in which his head-quarters are situated. (No. 450—XIV-130, dated 14th October, 1912.)

12. (1) The following are exempt from the payment of fees being permitted to hunt, shoot, and fish on the same condition as permit-holders :--

(a) Gazetted Forest Officers on duty.

[For the purpose of this rule the Commissioner of Kumaon shall be deemed to be a Gazetted Forest Officer within the Kumaon civil division.]

(b) Within the limits of the Siwalik forest division Commissioned Officers of the 2nd Gurkha Regiment, British and Indian Non-Commissioned Officers and men holding passes issued by the Commanding Officer up to the 15th February in each year or such previous date as the Conservator may declare the forests closed to ingress on account of danger from fire.

(2) In the Dehra Dun District within the areas leased to the Dehra Dun Fishing Association, its members are permitted to fish without permit.

13. Requests for permits shall be dealt with in order of priority of application. No such application shall, however, be valid if received more than three months before the permit is required. A register shall be maintained in the office of each Divisional Forest Officer, showing for each class of permit :--

(a) Date of receipt of application.

(b) Date of application.

(c) Orders passed.

(d) Date of order.

14. No permit shall be refused merely on the grounds that a permit for a later date has already been sanctioned, but such permit shall only be granted for a period which does not infringe the interval established by the grant of a permit previously applied for.

Example.—“ A ” has obtained a permit from the 1st to the 25th April, “ B ” applies for a permit for 15 days from the 25th April, the prescribed interval of rest does not expire till the 30th April, “ B ” may therefore be offered a permit from the 1st to the 10th of May, provided that no permit has been granted in May, previous to the 25th. In the case of the refusal to grant a permit, the grounds of refusal shall be at once communicated to the applicant, who is entitled to appeal to the Conservator, whose decision shall be final. A copy of the grounds of refusal shall be furnished at once to the Conservator, who is empowered, if he sees fit, to exercise powers of revision.

Notification No. 741—XIV-11, dated 1st October, 1914.—In supersession of Notification No. 111—XIV-11, dated the 11th February, 1914, and in exercise of the power conferred by Sub-section (2) of Section 2 of the “ Wild Birds and Animals Protection Act,” 1912 (VIII of 1912), the Lieutenant-Governor of the United

Provinces of Agra and Oudh is pleased to apply the provisions of the said Act to the wild birds specified in the first schedule, and further in exercise of the power conferred by Section 3 of the said Act, and, in supersession of all previous orders and rules made in this behalf, to declare the periods specified in the third column of the second schedule to be a close time for the wild birds and animals shown respectively against the said periods within the areas specified in the fourth column :—

THE FIRST SCHEDULE.

English name.	Hindustani name.
<p>(a) Hoopoe</p> <p>Rufous, short-toed lark or ortolan ..</p> <p>Black drongo or king crow ..</p> <p>Jungle babbler or seven sisters ..</p> <p>Indian oriole, black-headed oriole ..</p> <p>Gray-headed mynah ..</p> <p>Common mynah</p> <p>Bank mynah ♂</p> <p>Pied mynah ♀</p> <p>Common hawk</p> <p> kucukoo ..</p>	<p><i>Hud-hud.</i></p> <p><i>Bhigari or Bhigaira.</i></p> <p><i>Bhujanga Hojanga, Tham-pal, Kotwat.</i></p> <p><i>Sat Bhai.</i></p> <p><i>Plak.</i></p> <p><i>Maina.</i></p> <p><i>Daryi Maina.</i></p> <p><i>Ablack Maina.</i></p> <p><i>Popiyi.</i></p>

THE SECOND SCHEDULE.

English name.	Hindustani name.	Period.	Area.
(a) The Birds mentioned in the First Schedule—			
Indian roller or blue jay	Nilcant ..	Whole year.	United Provinces.
Hérons ..	Nari, Sain Bagla, Bara Bagla, Wak, Chrenak.		
Egrets ..	Karachia Bagla, Safed Bagla, Tar Bagla, Surkia Bagla, Lal Bagla, Badami Bagla.		
Kingfishers ..	Kanderla, Hariali, Kilkila, Korjala kilkila, Chota kilkila, Machrala, Kaurilla, Muchbagh.		
(b) Bustards ..	Charaj Thar, Hukna, Houbana,	1st April to 14th September.	

THE SECOND SCHEDULE—(contd.)

English name.	Hindustani name.	Period.	Area.
Floricans ..	<i>Charaz Charaj Likh.</i>	1st April to 14th Sep- tember.	United Provinces.
Jungle-fowl ..	<i>Jangli Murghi ..</i>		
Spur-fowl ..	<i>Choti Jangli Murghi.</i>		
Painted-snipe ..	<i>Rangin Chaha ..</i>		
Wood-cock ..	<i>Sham Titur ya Sham Kukra.</i>		
Pheasant ..	<i>Kali, Chir, Munal, Koklas, Juar, Lungi.</i>	1st March to 31st July.	
Pigeon (green) ..	<i>Harial, Koklu.</i>		
(c) Sand-grouse ..	<i>Bhat titar ..</i>		
(d) Quail ..	<i>Baler ..</i>	1st July to 14th Sep- tember.	
(e) Bartavelle or Greek Partridge.	<i>Chakor ..</i>	15th Febrn- ary to 14th September.	
Snow-cock ..	<i>Hinwal ..</i>		
Snow-partridge ..	<i>Larwa ganguria ..</i>		
Wood ditto ..	<i>Pura ..</i>		

English name.

(f) Grey-partridge

Painted ditto

Swamp ditto

Black ditto

(g) Pea-fowl

(h) Ducks—

Whistling-teal

Cotton ditto

Comb-duck

Spotted-bill

THE SECOND SCHEDULE—(contd.)

Hindustani name.	Period.	Area.
<i>Safed titar</i> ..	1st March to 31st August.	In Benares, Allahabad, Jhansi and Agra divisions.
<i>Kala titar</i> ..	1st April to 14th September.	In Meerut, Kumaun, Bareilly, Lucknow, Fyzabad and Gorakhpur divisions.
<i>Kair</i> ..	1st March to 31st August.	In Benares, Allahabad, Jhansi and Agra divisions, except Etah District.
<i>Kala titar</i> ..	Whole year ..	Etah District.
	1st April to 14th September.	In Meerut, Kumaun, Bareilly, Lucknow, Fyzabad and Gorakhpur divisions.
<i>Mor</i> ..	15th May to 14th September.	United Provinces.
<i>Silli</i> ..	15th June to 30th September.	
<i>Girri</i> ..		
<i>Nukhta</i> ..		
<i>Gargral</i> ..		

THE SECOND SCHEDULE--(contd.)

English name.	Hindustani name.	Period.	Area.
(i) Sambhar (males) ..	<i>Jerai sambhar ka nar</i>	1st April to 14th October.	United Provinces,
Swamp deer (males)	<i>Gond ka nar</i> ..		
Hog ditto	<i>Para ka nar</i> ..		
Barking ditto	<i>Khakar ka nar</i> ..		
Four-horned antelope (males).			
(j) Spotted deer (males)	<i>Chausingha ka nar</i>	15th September to 31st January.	United Provinces except as regards ravine deer, the forests included in the aforestations and Etawah Forests divisions in the districts of Etawah, Cawnpore, Hamirpur and Jalam.
(k) Females and young of sambhar, swamp deer, hog deer, barking deer, four-horned antelope, spotted deer, musk deer, wild goats, wild sheep, goral and ravine deer.	<i>Madina jerai, Sambhar Gond, Para, Khakar, Chausingha, Chital, Kasturi, Tahr-Serai, Barhel, Goral, Chinkara ki aur unke bachche.</i>	Whole year.	

THE SECOND SCHEDULE--(concl'd.)

English name.	Hindustani name.	Period.	Area.
(l) Indian antelope ..	<i>Hiran, Mirga</i> ..	15th June to 15th September.	Benares, Allahabad, Gorakhpur, Meerut, Bareilly, Lucknow and Fyzabad divisions except in the forests included in the aforrestations and Etawah divisions in the districts of Etawah, Cawnpore, Hamirpur and Jalaun.

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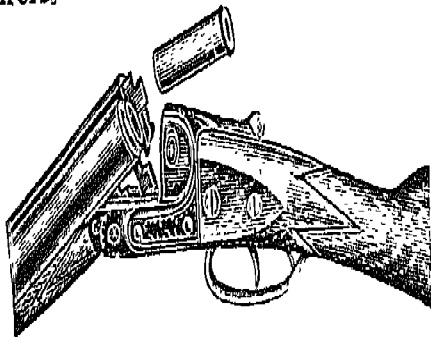
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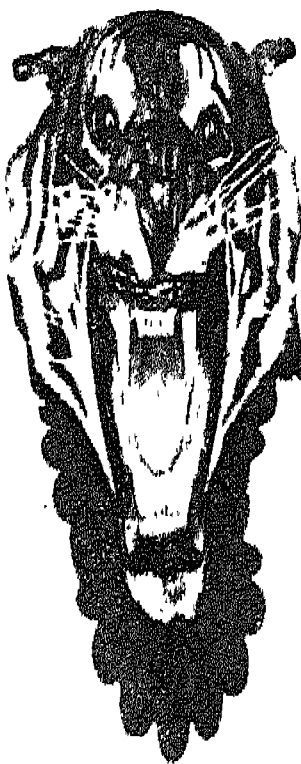
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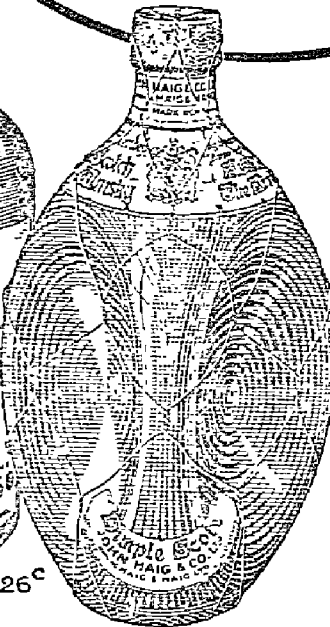
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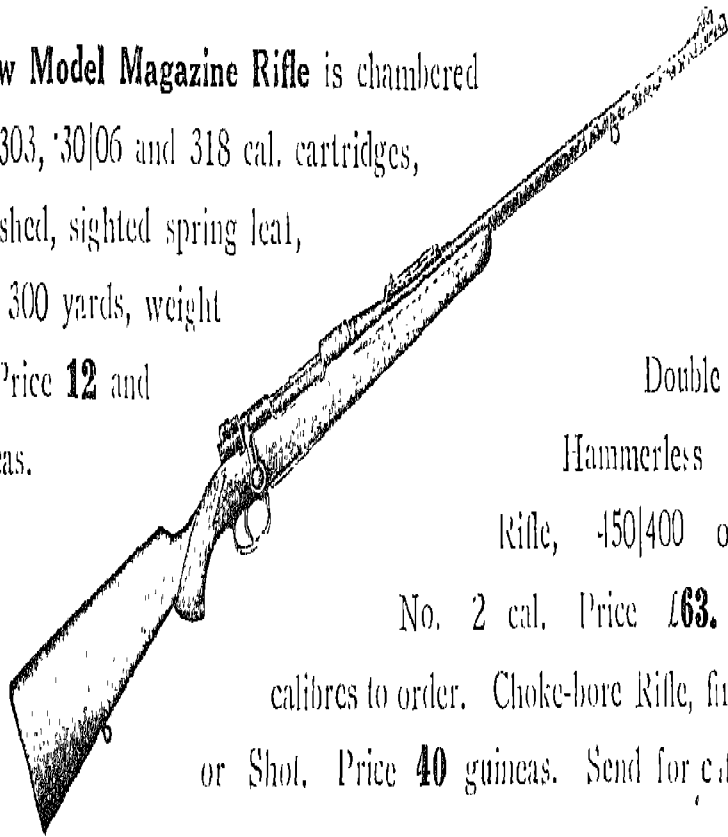
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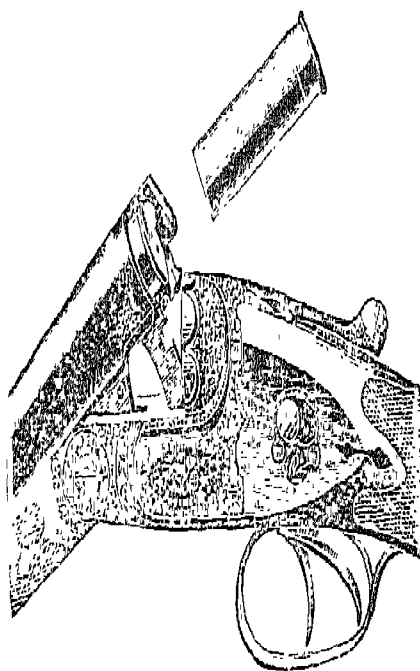


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